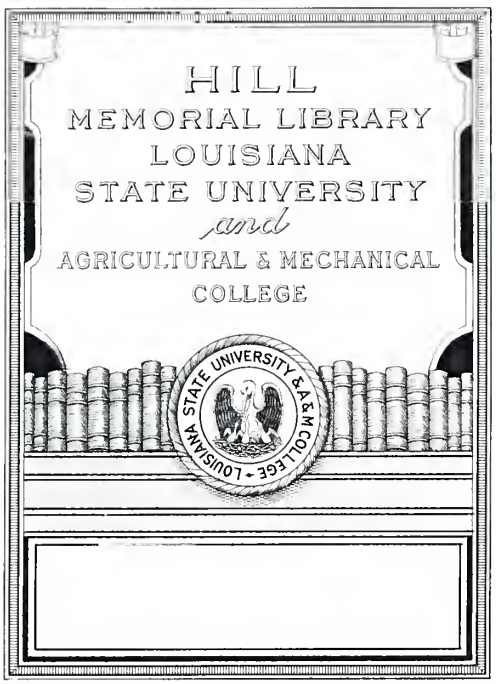
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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., OCTOBER 1, 1942 No. 1

ANNUAL ADDRESS

of Mr. Wallace C. Kemper, President of the American Sugar Cane League, delivered extemporaneously at the Annual Meeting of the League on September 24th, 1942 and transcribed for the ***Sugar Bulletin*** *by the official stenographer.*

I think it has been the custom for a good many years for the retiring President to deliver an elaborate address and report on his year in office. I have seen a lot of you squirm from restlessness during the reading of those four or five page documents, so I will try to merely touch now on a few of the high spots. One of our previous Presidents some twelve or thirteen years ago, who is slightly connected with me by marriage—my father—made a report that won for him, so he said, a claim to fame as President of the League because when his administration began the price of cane was 4.50 and when he went out it was 3.20, and he wanted personal credit for being so successful in holding up the price of sugar. I came in September and in December we went into a war, so I deserve some credit too.

For the high spots of the year I looked back in the *Sugar Bulletin* to refresh my memory. I noted in the final report of President Giles who preceded me that one of the features of his term of office was the number of governmental agencies that had cropped up, or were brand new. Last September, when I came in, there was no WPB and no OPA. I did not realize that they are so young. We had an "OPACS" which set the price of sugar in August, and an OPM which preceded WPB. The OPA and WPB have come in since and we now have three government agencies handling sugar and three handling molasses. On top of that we have about 20 other bureaus, too numerous to mention by name. We are trying to get money from the Defense Supplies Corporation, and we have the ODT. Mr. Shaffer is commuting to Washington contacting many other bureaus, trying to dislodge various equipment which we need. As a matter of fact we are just starting with Governmental bureaus. I am delighted to report this—and I sincerely mean it. I do not see any government men here so I am just talking for their benefit. There is no longer any attempt by these various officials to use their control in a crusading spirit. They do exhibit a desire to cooperate with us.

On October 13th last there was the first announcement that the acreage limitations might not be applied for 1942! Of course we ran into real Government on December 7th, the date of the attack on Pearl Harbor. On December 13th OPA issued Order M-55 controlling the supplies of sugar, limiting everybody to 30 days' supply. On December 19th the OPA issued white sugar Order No. 60, and on December 26th, the Sugar Act was extended for three years, with two notable changes—increasing the benefit payments from 60c a hundred to 80c a hundred, and revising the child labor provisions. Violations are now subject to a fine instead of a complete loss of benefit payments. On December 29th the Cuban duty was lowered. Order M-54 came out January 5th of this year. The new price for raw sugar was 3.73 and refined 5.45, and the Cuban crop was bought at the same time—at 2.65 in Cuba and I may add incidentally that they are now saying the Cuban crop may be bought for less money next year. On January 16th we had the formation of the WPB, with Mr. Bowman in charge, but we have since lost him and he has been succeeded by Mr A. A. Thomson, an able man. On January 24th Mr. Voorhies went to Washington to help put over the sorgo program in which he was successful (to his personal sorrow!) Mr. J. J. Shaffer started commuting to

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SUGAR BULLETIN

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Marcel J. Voorhies, Editor
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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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Washington again to try to get us tires.

On January 25th the price control bill was passed to pay us 110% of parity and on January 26th the OPA came out with an announcement that the maximum for raws should not exceed the price date of arrival at refinery, a blunder which we have hoped will be corrected retroactively. It does not affect the industry as a whole, as only six raw sugar producers in the State had contracts with two refiners which were affected by the ruling. On February 14th, Order M-98 came out allocating raws to refiners, with Louisiana raws exempt from the order, but some six months lated they issued a new M-98 and put Louisiana in it.

On February 16th we had the cultivation labor announcements, and on February 26th Mr. Voorhies went to Washington again on sorghum; then, on March 7th, Mr. Wickard authorized the sorgo acreage and it was planted in April. On March 11th the League obtained 15,000 tons of Nitrate of Soda for immediate use in the Louisiana cane area. We are working on that now and we hope to do as well for this coming season.

On March 24th the AAA announced the 1942 proportionate shares! In March 1942 you were told that whatever number of acres you had planted in 1941 that was your proportionate share. On March 24th the refined price was raised in the East, but not in the South, because of higher costs and because they were shorter of sugar in the East than were Southern refiners, and during March we had three amendments to M-55 and in April M-55 was superseded by OPA's rationing order.

On April 1st the season average raw sugar price was announced, resulting in 3.61 for raws and 3.66 for cane, and 26.6c per ton of cane for molasses. In late April and early May we went throught the rationing sign-up, and in May and June our indefatigable Mr. Shaffer made two trips to Washington on priorities and Mr. Farwell called on the Selective Board to try to get the deferment of some of our key men. In June, OPA explained that 110% of parity for the Louisiana cane farmer was based on figures of the beet growers, the use of which resulted in less for us. I have not been able to figure that out. They might figure it on corn next year, as sugar is made out of corn too. In July the League released C. P. 34-120 cane and the distribution of this variety is now going on. Mr. Voorhies is still working on it.

In July, the ODT, a new Government Bureau, arrived, and in August there was a sugar allocation announcement to include Louisiana raws. We have a couple of the members of the Raw Sugar Committee present who may be able to give you the high spots of a meeting on that question held yesterday. I do not think they can give too much detail but they can give a general idea. Since the rationing order came out, thirteen amendments have been issued to it—in 4½ months.

The Government is now concentrating on a plan to shut down, roughly, half of the refiners in the United States because there is not the raw sugar available to utilize all refineries to full capacity. Most of this year's rulings have been rulings pertaining to white sugar. We have succeeded in keeping not only "direct consumption" sugar free from most of the government orders, but also raws. However, the raw man will be told how he can move his sugar to a refiner. The zoning order does not apply to direct consumption sugar. The refined sugar order is limited to four houses in the Louisiana sugar district, and turbinados and crystals and so on can go anywhere, so we have managed to keep a few things from under control.

There is one thing hanging over our heads: there are two million tons of sugar left in Cuba from the crop just completed that could not be moved, and 600,000 tons in Puerto Rico, all to be delivered along with the production of next year, estimated to be 3,500,000 tons in Cuba and 1,200,000 in Puerto Rico That will amount to better than 5½ millions tons of Cuban sugar and 1,800,000 in Puerto Rico sugar Of course it is not pressing on our market now, but when the war ends there it is. We have to worry about this stupendous stock of sugar. Another thing we have to do it to correct and combat some of the Government paid advertisements about sugar being bad for health and advocating getting along with less. There is a plan now whereby Cuba, Puerto Rico, Hawaii, the beet and the domestic cane people will each chip in a proportion based on ¼c per ton of sugar—not per ton of cane—which will amount in Louisiana's instance to about $10,000, but the total pot will be about $450,000 if it goes through. The League has not the money to put up for such a publicity campaign and I think we will have to raise it through special subscriptions as we did about three years ago, but if we get a share of a $450,000 campaign by putting up only $10,000 we will get a lot out of it. It is quite important to all of us.

I cannot stop without pointing out that the League employes, and League officials, the Chairmen of the League committees and the members of all committees worked very diligently this year. It was a tough year, and they have all done a very good job and I

think they should be thanked by you for the work they have done. I know they have been very helpful to me. The support and cooperation I have had personally from the members of the League has helped me tremendously and I want to express publicly my thanks and appreciation.

Adjusting Ourselves To War

(By C. J. Bourg)

Trucks, Tires, and Gasoline

To emphasize what we have repeated before in *The Sugar Bulletin* regarding trucks, tractors and tires and to point out the *official* confirmation of our recommendations previously made regarding tire inspections repairs, speed and use, a summary of the report made by the Baruch Committee to the President and to Congress is submitted below.

We plead with all sugarcane growers and with the owners of trucks to be used for hauling sugarcane to remember—always—that no new trucks are being manufactured and precious few new tires are being produced; therefore, plans must be made for using the trucks tractors and tires you now have for at least two and proably three or more grinding seasons.

The Baruch report points out that there will be a deficit of 211,000 tons of synthetic rubber before January 1, 1944, because military requirements and essential war production needs will exhaust all stocks of crude rubber by the Summer of 1943; and this statement is made without making any provision for passenger automobile tires.

The report states that unless there is drastic curtailment of civilian automobile driving, a majority of the automobiles will have to be taken off the road next year.

The corrective measures which have been proposed by the Baruch Committee are:

1. National gasoline rationing, to hold passenger car driving down to a miximum average of 5,000 miles a year.

2. A voluntary tire conservation program until gasoline rationing can be established.

3. A national speed limit of 35 miles an hour, with a request for a voluntary limit of 30 miles.

4. Expansion of the government's synthetic rubber program to 1,106,000 tons annually for present 877,-000-ton plan.

5. Release of more rubber to the public through recapping old tires or the issuance of new ones, so as to maintain fully "necessary" civilian driving.

6. Compulsory periodic tire inspection.

7. Centralized control over rubber, under a rubber administrator, to be appointed by the chairman of the War Production Board. (Wm. Jeffers has been appointed Administrator, with a complete technical staff.)

Parity and Price Control

The President having announced his determination to take action to prevent inflation, issued an ultimatum to Congress to amend the Price Control Act with regard to 110% of parity for farmers. Congress appears to be determined that, if the prices of farm products are to have lower ceilings than now recognized by law, then there must be corresponding ceilings placed upon wages of labor. Decisions in this regard are expected to be made by October 1st.

It is, therefore, interesting to the sugarcane farmers to know what parity and 110% of parity may mean in the case of sugarcane. The following tables demonstrate three ways in which 110% of parity can be computed for sugarcane, depending upon whether one uses the average parity index for 1941, (134), the latest current parity index, (152), or the crop-season average parity index from September 1941 through August 1942, (147):

Minimum price for raw sugar which will give returns to sugarcane growers equaling 110% of parity

1. Based on Average Index for 1941		
Parity price for sugarcane (3.73 x 134)		$5.00
110% of parity		5.50
Less: Conditional payment (163 lbs. sugar @ $.80 per 100 lbs.)	$1.30	
Less: Growers' participation in molasses proceeds	.27	1.57
Factory price to growers, after deducting for conditional payment and molasses		$3.93
Minimum price of raw sugar, after dividing 3.93 by 103, as growers' contract provides 3% premium when raw sugar sells above 3.75c per lb.		3.82
2. Based on Latest Current Index—August 1942		
Parity price for sugarcane (3.73 x 152)		$5.67
110% of parity		6.24
Less: Conditional payment (163 lbs. sugar @ $ .80 per 100 lbs.)	$1.30	
Less: Growers' participation in molasses proceeds	.27	1.57
Factory price to growers, after deducting for conditional payment and molasses		$4.67
Minimum price of raw sugar, after dividing 4.67 by 103, as growers' contract provides 3% premium when raw sugar sells above 3.73c per lb.		$4.53
3. Based on Crop-Season Average Index—September 1941-42		
Parity price for sugarcane (3.37 x 147)		$5.48
110% of parity		6.03
Less: Conditional payment (163 lbs. sugar @ $ .80 per 100 lbs.)	$1.30	
Less: Growers' participation in molasses proceeds	.27	1.57
Factory price to growers, after deducting for conditional payment and molasses		$4.46
Minimum price of raw sugar, after dividing 4.46 by 103, as growers' contract provides 3% premium when raw sugar sells above 3.73 per lb.		$4.33

As the President has declared that 100% of parity is a sufficient price for farm products, the computation of how that would be reflected in the price of sugarcane and the price of raw sugar, using the latest published current index (August 1942), is as follows:

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Parity price for sugarcane (3.73 x 152)		$5.67
Less: Conditional payment (163 lbs. sugar @ $ .80 per 100 lbs.)	$1.30	
Less: Growers' participation in molasses proceeds	.27	1.57
Factory price to growers, after deducting for conditional payment and molasses		$4.10
Minimum price for raw sugar, after dividing $4.10 by 103, as growers' contract provides 3% premium when raw sugar sells above $3.73c per lb.		$4.00

The Price Control Act also prohibits the Administrator from fixing a ceiling which would deprive farmers from receiving the average price they received for the 1919-1929 crops. This computation would be as follows:

Minimum price for raw sugar which will give returns to sugarcane growers equaling the 1919-1929 average

Price paid growers per ton of cane (average of 1919-1928 crops)		$5.93
Less: Conditional payment (163 lbs. sugar @ $ .80 per 100 lbs.)	$1.30	
Less: Growers' participation in molasses proceeds	.27	1.57
Factory price to growers, after deducting for conditional payment and molasses		$4.36
Minimum price for raw sugar, after dividing 4.36 by 103, as growers' contract provides 3% premium when raw sugar sells above 3.75c per lb.		$4.24

Fertilizer For 1943

Correspondence with regard to fertilizer for the 1943 crop indicates that the WPB and the Office for Agricultural War Relations expect to make available after November 15th considerable supplies of sodium nitrate. The American Sugar Cane League is acting as the intermediary in order to make sure that the large acreage of sugarcane which is now being planted for harvest in 1943 will have a sufficient supply of fertilizer to yield maximum returns. The exchange of letters reproduced below indicates the progress already made to anticipate the fertilizer needs of the sugar belt well in advance.

August 23, 1942.

Dr. P. H. Groggins, Chief,
Chemicals Division,
Office for Agricultural War Relations,
Washington, D. C.

Dear Mr. Groggins:

In confirmation of our conversations, I would like to report that the sugarcane producers of Louisiana expect to use upwards of 15,000 tons of sodium nitrate for the 1943 crop. The normal season for applying fertilizer on sugarcane in Louisiana is in the month of March.

In view of the emergency conditions, I have contacted large users and distributors of fertilizer in Louisiana; and I have received requests in writing for 5,610 tons of sodium nitrate on which delivery in Louisiana would be accepted prior to January 1st. I have not yet heard from all sugarcane producers, and I will report to you any additional tonnage on which delivery would be accepted before the first of the year.

In view of the fact that the carrying qualities of sodium nitrate in the Louisiana climate have not been very good during hot weather and when delivered in bulk, the Louisiana sugar producers would appreciate it if early deliveries were made in water-proof containers, such as paper bags with at least one ply of tar coating.

It is our understanding that should the Government arrange for sodium nitrate deliveries, such arrangements will include delivery f.o.b. at ports or points in Louisiana.

It is understood that the sugarcane producers will submit their orders to distributors or handlers in accordance with custom, so that the business negotiations will be conducted as usual. The agreement to be reached with your office would be exclusively one of arranging for deliveries f.o.b. Louisiana ports or points for prompt acceptance by sugarcane producers or local distributors.

Assuring you that we appreciate greatly your willingness to assist in insuring adequate supplies of fertilizer for the 1943 crop in the same manner as you did so satisfactorily for the 1942 crop, I am

Very truly yours,
C. J. BOURG, *V. Pres.*

CJB:MCK

September 4, 1942.

Dear Mr. Groggins:

Supplementing my letter to you of August 23rd, copy attached, the American Sugar Cane League has received requests from growers for an additional 6,105 tons of sodium nitrate on which delivery in Louisiana would be accepted prior to January 1st. As the request submitted on August 23rd amounted to 5,610 tons, the total requests are now for 11,715 tons of sodium nitrate.

The sugarcane growers have requested me to point out that they would appreciate receiving the sodium nitrate in granular or pellet form and that, for the purposes of storage and keeping qualities, the deliveries in paper bags would be an insurance that by accepting the fertilizer this Fall they would not be incurring too great a risk.

As stated to you over the telephone, if it should be found impossible to ship from the West Coast in water-proof bags, there would remain the possibility of shipping in bulk to Louisiana where distributors might be better able to arrange for the bagging of the sodium nitrate.

We will await your advices and, in the meantime, hold ourselves available to cooperate with you.

Very truly yours,
/S/ C. J. BOURG, *V. Pres.*

* * * *

September 8, 1942.

Dear Mr. Bourg:

Reply is made to your letter of September 4 advising us of requests from sugar cane growers for an additional 6,105 tons of sodium nitrate on which delivery in Louisiana would be accepted prior to January 1. If this quantity is added to the amount previously requested on August 23, the total would aggregate 11,715 tons.

According to recent decisions on the part of war agencies, sodium nitrate will not be delivered before November 15. We will, however, present lists of requests to the War Production Board in order that allocations may be made at the earliest date so that shipments will proceed after November 15. You can rest assured that the requirements for the sugar bowl

will be viewed sympathetically and that your interests will be safeguarded.

Yours very truly,
/S/ P. H. GROGGINS
Chief, Chemicals Div.

Mainland Sugar Appreciated

Acting to assure adequate sugar supplies for consumers in Tennessee and Kentucky, the Office of Price Administration lately authorized eight Western beet processors and one West Coast cane refiner to distribute in those States, which ordinarily they do not serve.

The authorization carries with it an assurance to the refiners that Defense Supplies Corporation will reimburse them for the excess freight costs entailed.

This action was necessary, it was stated by OPA, because supplies of sugar in the hands of Gulf refiners who normally supply Tennessee and Kentucky are at present not adequate to meet this demand. The short supply reflects the *critical shipping situation* which holds down *receipts from off-shore areas.*

Thus the evidence piles up relative to the value of the continental production of sugar. Beet sugar is being delivered in Maine and other Atlantic Seaboard States. Consumers would look to a mighty bleak winter for sugar and sweets if it were not for the prospect of bountiful production of sugar this Fall in Louisiana, Florida, and the sugar beet States. It is a darn nice feeling to have Government officials in Washington anxious and hopeful about the success and size of the Louisiana sugar crop. May their memories be long!

More About Draft (Selective Service) Deferment

The Bureau of Public Relations, War Department, issued a press release on September 11, 1942, entitled "Army and Navy to Regulate Enlistment of Men in Federal Posts and War Industry."

This release stated that civilians occupying key positions in Federal agencies and in a list of other occupations in war industry would not be accepted for officer's commission or voluntary enlistment without first obtaining a *written release* from the head of the agency or *war industry* concerned. It then refers to a list of essential industries and states:

> "The list is also to be used as a guide by the local Selective Service Boards in connection with the problems of occupational deferment, and by the United States Employment Service in determining which types of activities should be regarded as having prior claim to the workers available for referral to job openings. The War and Navy Department policies on the appointment and commissioning of civilians will apply to any revisions of this list that may be approved by the War Manpower Commission or the Selective Service System."
>
> Included in this list of essential activities are:
> *Agriculture* * * * * sugar-beet, sugar cane, * * * *
> *Food processing* * * * * * * sugar * * * * * *

If written release is refused to the employee who is seeking a commission or who wants to volunteer, procedure is provided for him to appeal and to have his case decided on its own merits by the Joint Army any Navy Personnel Board at Washington.

BUY WAR STAMPS AND BONDS

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S.D.A. DEFENSE BOARD
University Station
Baton Rouge, Louisiana
September 21, 1942

Mr. Wallace C. Kemper, President
American Sugar Cane League
Franklin, Louisiana
Dear Mr. Kemper:

The USDA War Boards in the state are cooperating with the State War Savings Committee in a campaign to sell War Bonds and Stamps to farmers during the harvest season. This is to request your assistance in this campaign. You are probably already encouraging the members of your organization to purchase War Bonds and Stamps; however, if you have not taken any action along this line we would like to request that you in some way call the need of war savings to the attention of your membership. You, of course, are the one that knows how this can best be done.

Indications are that in spite of all our difficulties farmers' incomes will be considerably higher in Louisiana this year than during the past years. We realize that costs of production have been greater, but we still believe that most farmers will end up the harvest season with more money to spend than they have had in several years. We believe that farmers should be urged to use this additional income in one of two ways; first, to reduce their indebtedness, certainly to a point of having their short and long time obligations current, and, second, to buy War Bonds and Stamps.

Each purchase of War Bonds will reduce their expenditures and will directly assist in the program to control inflation. A reserve of War Bonds will also enable farmers to better adjust themselves during the period of readjustment which is sure to follow this war.

Very truly yours,
Signed /S/ G. J. Durbin, Chairman,
Louisiana USDA War Board

Support From Southern Commissioners

Louisiana's Commissioner of Agriculture, Harry D. Wilson, informs us that the Southern Commissioners of Agriculture at their annual meeting adopted a Resolution favoring the expansion of the domestic sugar industry in this language:

> "On Motion of Mr. McDonald it was unanimously agreed that it should not be the policy of the national government to restrict the domestic production of sugar until all of our home and local requirements have been attained."

A memorandum of the Resolutions adopted is being sent to Secretary of Agriculture Wickard and all Members of Congress. It is encouraging to see more evidence of the continued support of this influential group of agricultural leaders, and the industry will acknowledge gratefully this action by its friends.

A Rationing System For War Machinery

Secretary of Agriculture Claude R. Wickard announced that a temporary order prohibiting the sale of new farm machinery and equipment, except as specified in a rationing system governing its release, was issued today. The temporary order takes effect September 17, 1942, and will be followed later by a permanent order governing the release of farm machinery in 1943.

The order outlines conditions under which farm machinery and equipment may be purchased, and sets up procedure and organization for rationing the available supply among farmers.

Authority to ration farm machinery and equipment was delegated to the Department of Agriculture by the Office of Price Administration in an order effective September 16. Previous to that, the War Production Board issued a directive authorizing OPA to ration farm machinery or redelegate the authority.

In commenting on the program for rationing farm machinery and equipment, Secretary Wickard said, "Our military requirements have made it necessary to reduce drastically the amount of steel and other metals which can be used for even the most essential civilian requirements. About 75 percent of our present steel production is now going for direct war uses —to make the guns, planes, tanks, and ships our fighting forces need to help win the war on widely scattered battlefronts. The amount of materials which will be made available for manufacture of farm machinery and equipment in 1943 will provide much less machinery and equipment than will be needed.

"The temporary rationing system provided in the regulations issued today is designed primarily to control the distribution of the limited supply of farm machinery and equipment now on hand to assure its greatest possible contribution toward meeting the goals in our Food-for-Freedom program. We must concentrate our efforts on producing foods that will help most to win the war, and distributing machinery through a fair system will help farmers, our own Nation, and the whole cause of the United Nations, by making the limited supply of machinery meet the most critical needs in our wartime farm production program."

Secretary Wickard announced that Fred S. Wallace, Special War Board Assistant, will be in charge of the farm machinery rationing program at the national level, and that State USDA War Boards will be responsible at the State level. The rationing regulations provide for the establishment of county rationing committees to administer the plan in the counties. The Chairman of the County AAA Committee in each county, who is also Chairman of the USDA War Board, will be chairman of the county rationing committee. County USDA War Boards will appoint two other farmer members, and their alternates.

The temporary rationing plan classifies farm machinery and equipment in three groups.

Items in the first group, (Group A), include farm machines vitally essential to current agricultural needs and which may not be sold by a dealer unless the farmer has obtained a purchase certificate from his county rationing committee.

The types of machinery in this group for which a farmer must have a purchase certificate include: beet lifters, beet loaders, combines, corn pickers, disc harrows, feed grinders, fertilizer spreaders, grain drills, grain elevators, hay balers, lime spreaders, manure spreaders, milk coolers, milking machines, pickup balers, potato diggers, shredders, and tractors (including garden tractors).

In general, the farmer will be required to show that his present equipment is not adequate to handle his production, that he cannot meet his equipment needs by repairing existing equipment, by purchasing or renting used equipment, by custom work or other means. He must also show that failure to approve his application will result in a substantial reduction in production of commodities essential in the war effort, and that the machinery will give better than average service for similar equipment in the community.

Items in a second group, (Group B), include most other farm machinery and equipment not in the first group, and which may be sold upon certification by the farmer to his dealer that the equipment is essential for current agricultural production needs.

Items in the third group include such items as some hand tools and the smaller horsedrawn equipment, which may be sold without restriction.

The temporary rationing plan does not apply to repair parts, and excludes such items as automobiles, trucks, tracklaying tractors, or equipment ordered by Governmental agencies.

Instructions for issuing applications for purchase certificates and other procedure have been sent to State and County USDA War Boards.

In cases where an applicant is denied a purchase certificate by the county rationing committee, provision is made for an appeal to the County Rationing Committee and from there to the State USDA War Board, and to the Secretary of Agriculture through the special War Board Assistant.

September 21, 1942.

Mr. W. C. Kemper, President,
American Sugar Cane League,
Franklin, La.
Dear Wallace:

Upon receipt of your telegram I checked the Federal Register and found that the Secretary of Agriculture has been given the power to ration farm machinery, and he issued a Temporary Rationing Order A (TRO A), which appears at Page 7301 Federal Register of September 17th. I also called the Farm Machinery and Equipment Branch, of which Mr. Tracy is the Chief, and they state that the pertinent applicable provision is the following:

> "2.11 Acquisition of Group B new farm machinery and equipment. Any farmer may acquire new farm machinery and equipment in Group B by certifying with the person from whom he purchases such new farm machinery and equipment that it is necessary to use such farm machinery and equipment during the remainder of the calendar year 1942. Such certification shall be in the form listed in Schedule III attached hereto, which form shall be filed with and retained by the dealer. No transfer on such a certification shall be valid if *delivery* is not made to the purchaser *before November* 1, 1942."

The list under Group B contains "Group 5, Harvesting Machines," which includes cane harvesters.

The only requirement with respect to cane harvesters will be that the seller of the harvester (whether manufacturer or dealer) will obtain from each purchaser a certification in the following form:

"To.....
Name of Dealer

.....
Adress of Dealer

"I hereby certify that the farm machinery and equipment described below is necessary to handle my production during the remainder of the calendar year 1942, including increased or new production planned and needed as a contribution to the current agricultural need: (Description of machinery and equipment)

.....

.....

.....
"Signature of Purchaser

.....
"Adress of Purchaser

.....
"Date"

A County Rationing Committee is authorized to be appointed in each parish, consisting of three members appointed by the County USDA War Board. The effective date is September 17th.

Very truly yours,
C. J. Bourg, V. Pres.

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Vol. 21 NEW ORLEANS, LA., OCTOBER 15, 1942 No. 2

Price Determination For 1942 Louisiana Cane Crop Announced

(Official Release)

The U. S. Department of Agriculture announced that the basic minimum rates to be paid for the 1942 crop of Louisiana sugarcane on October 10th by processors who, as growers, apply for conditional payments under the Sugar Act of 1937, are the same as in 1941. Provision has again been made for growers to share equally with processors in any income in excess of 8 cents per gallon from the sale of blackstrap molasses. This provision, which was first embodied in the price determination for the 1941 crop, had the effect of increasing grower income from that crop by 26 cents per ton of sugarcane.

The Sugar Agency of the Agricultural Conservation and Adjustment Administration stated that the only change from the 1941 price determination concerned the price period which may be used in settlement of the 1942 sugarcane crop. The bulk of the Louisiana cane crop is normally settled for on the basis of the simple average of the weekly quotations for raw sugar during the marketing season, which this year has been defined as the period October 9, 1942-April 1, 1942. However, if, as a result of any government order, it is necessary to market the entire raw sugar crop prior to April 1, a shorter price settlement period for sugarcane may be used.

The determination provides for a continuation of the 1941 basic rate under which growers will receive not less than $1.00 per ton of standard sugarcane for each 1 cent of the price of 96° raw sugar, duty-paid basis, when the price of raw sugar is 3.50 cents per pound. Provision is made for a reduction of not more than 3 percent in the basic rate for each ¼ cent decline in the price of raw sugar down to 2.75 cents per pound, and for an advance of not less than 3 percent in the basic rate for a rise of ¼ cent or more above 3.5 cents per pound.

The established definitions of standard Louisiana sugarcane, as well as the established premiums and discounts, will be continued for 1942.

The Sugar Act of 1937 provides that processors who, as producers, wish to qualify for conditional payments, purchase sugarcane at rates not less than those determined by the Secretary to be fair and reasonable, after public hearing and investigation. The public hearings were held at Baton Rouge and New Iberia, Louisiana, on August 19 and 21, respectively.

Part 802—Sugar Determinations Louisiana Sugarcane; Prices for 1942 Crop

Determination of fair and reasonable prices for the 1942 crop of Louisiana sugarcane for sugar, pursuant to the Sugar Act of 1937, as amended.

Whereas section 301 (d) of the Sugar Act of 1937, as amended, provides as one of the conditions for payment to producers of sugar beets and sugarcane, as follows:

That the producer on the farm who is also, directly or indirectly, a processor of sugar beets or sugarcane, as may be determined by the Secretary, shall have paid, or contracted to pay under either purchase or toll agreements, for any sugar beets or sugarcane grown by other producers and processed by him at rates not less than those that may be determined by the Secretary to be fair and reasonable after in-

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Marcel J. Voorhies, Editor
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vestigation and due notice and opportunity for public hearing.

Whereas the Secretary of Agriculture held public hearings for the purpose of receiving evidence likely to be of assistance to him in determining fair and reasonable prices for the 1942 crop of Louisiana sugarcane for sugar:

Now, therefore, I, Grover B. Hill, Assistant Secretary of Agriculture, after investigation and consideration of the evidence obtained at the aforesaid hearings and all other information before me, do hereby make the following determination:

§ 802.22i *Louisiana sugarcane for sugar*—(a) *Fair and reasonable prices for the 1942 crop.* Fair and reasonable prices for the 1942 crop of Louisiana sugarcane shall be (when the price of 96° raw sugar, duty-paid basis, is 3.50 cents per pound) not less than $1.00 per ton of standard sugarcane for each 1 cent of the average price per pound of raw sugar determined in accordance with whichever of the following options is agreed upon: (1) the average of the weekly quotations of 96° raw sugar, duty-paid basis, on the Louisiana Sugar and Rice Exchange and the Cane Products Trade Association Exchange for the week in which such sugarcane is delivered; or (2) the simple average of the weekly quotations of 96° raw sugar, duty-paid basis on the Louisiana Sugar and Rice Exchange and the Cane Products Trade Association Exchange for the weeks from Friday, October 9, 1942 (or the Friday within the first marketing week of actual trading) to April 1, 1943, except that, if such quotations do not give full effect to orders or regulations of the Federal Government pertaining to the establishment of a price for 96° raw sugar, duty-paid basis, at New Orleans, Louisiana, the Chief of the Sugar Agency may substitute such prices as will give effect to any such Federal orders or regulations: *Provided, however,*

(i) That for each decline of ¼ cent in the price of 1 pound of 96° raw sugar, duty-paid basis, below 3.50 cents per pound, the price of standard sugarcane shall be reduced by not more than 3 per centum, with intervening prices in proportion, unless the price of sugar falls below 2.75 cents per pound, in which case no further reduction shall be made:

(ii) That for an advance of ¼ cent in the price of 1 pound of 96° raw sugar, duty-paid basis, above 3.50 cents per pound, the price of standard sugarcane shall be increased by not less than 3 per centum, with intervening prices in proportion, unless the price of raw sugar exceeds 3.75 cents per pound, in which case settlement shall be made on the basis of $1.03 for each 1 cent of the price;

(iii) That the premiums paid for sugarcane of the 1942 crop containing more sucrose in the normal juice than that defined as standard sugarcane shall be not less than those paid during the 1941 crop year;

(iv) That the discounts applicable to sugarcane of the 1942 crop containing less sucrose in the normal juice than that defined as standard sugarcane shall be not greater than those applied in connection with the 1941 crop; and

(v) That, in the event any agency of the Federal Government shall, through any orders or regulations require modification of the normal marketing practices, then the price basis for settlement shall be determined by reference to the results of such orders or regulations and upon approval by the Chief of the Sugar Agency.

(b) *Definitions and general provisions.* (1) On each ton of Louisiana sugarcane there shall be paid a molasses bonus, such bonus to be computed by taking ½ of the excess, if any, of the average price per gallon of blackstrap molasses, as quoted by the agencies set out above for the period there specified, over 8 cents, and multiplying the product by 6½ (a figure representing the state average recoveries of blackstrap molasses for the three-year period, 1938-1940).

(2) Deductions based upon decreased boiling house efficiency may be made for frozen sugarcane accepted by the processor (it being understood that cane shall not be considered as frozen even after being subjected to freezing temperature unless and until there is evidence of damage having taken place because of the freeze) at a rate not in excess of 3.775 per centum of the payment, computed without regard to the molasses bonus, for each 0.25 cc. of acidity above 2.25 cc. but not in excess of 4.50 cc. (analyzed in accordance with the established methods of the area, with intervening fractions computed to the nearest multiple of 0.05 cc.).

(3) Standard sugarcane shall be sugarcane containing no more sucrose in the normal juice than was defined as standard sugarcane by the processor in his sugarcane purchase contract, or contracts, verbal or written, used in the year 1941.

(4) Costs, such as hoisting and weighing of sugarcane shall be absorbed by the processor, except in those instances in which the processor did not bear such costs in 1941; but nothing in this subparagraph shall be construed as prohibiting negotiations with respect to the level of such costs, subject, upon appeal, to review by the Secretary of Agriculture or his authorized agent, in the event of changes alleged to be

unfair to either the producer or the processor.

(5) Where the only available practicable means of transportation are rail facilities and the distance to the nearest factory is in excess of 50 miles, the cost of transportation may, by mutual consent of the interested parties, and subject, upon appeal, to review by the Secretary of Agriculture or his authorized agent, be shared by the processor and the producer.

(6) The processor shall not, through any subterfuge or device whatsoever, reduce the returns from the 1942 crop of Louisiana sugarcane to the producer below those determined above. (Sec. 301, 50 Stat. 910; 7 U.S.C. 1940 ed. 1131.)

Done at Washington, D. C., this 8th day of October 1942. Witness my hand and seal of the Department of Agriculture.

GROVER B. HILL,
Assistant Secretary of Agriculture.

(SEAL)
(F. R. Doc. 42-10113; Filed, October 9, 1942; 11:17 a.m.)

Harvesting Wages For Louisiana Cane Announced

(*Official Release*)

The U. S. Department of Agriculture announced on October 10th minimum wages to be paid laborers in the harvesting of the 1942 crop of sugarcane in Louisiana. The rates are expected to increase laborers' earnings from harvesting approximately 12 percent over 1941.

The Sugar Act of 1937 requires, among other conditions of payment to growers, that all persons employed on a farm in the production, cultivation, or harvesting of sugarcane be paid in full by growers at rates not less than those determined by the Secretary of Agriculture to be fair and reasonable, after public hearing and investigation. The public hearings were held at Baton Rouge and New Iberia, Louisiana on August 19 and 21, respectively.

The Sugar Agency of the Agricultural Conservation and Adjustment Administration stated that harvesting wages have been increased because of increased sugar prices and higher government payments, and because of rises in general farm wages and in the cost of living.

The basic working day for adult laborers has again been defined as a day of 9 hours. Workers between the ages of 14 and 16 may not be hired to work for more than 8 hours per day.

The rates follow:

(a) Time Rates	Per day of 9 hours	Per hour (cents)
(1) Cutting, topping, and stripping		
(i) Adult males	$1.85	21.0
(ii) Adult females	1.50	17.0
(2) Loading	2.25	25.0
(3) Cutting and loading	2.00	22.0
(4) Tractor drivers and truck drivers	2.30	26.0
(5) Teamsters	2.20	24.0
(6) Hoist Operators	2.00	22.0
(7) Any other harvesting operations not connected with mechanical loading or mechanical harvesting:		
(i) Adult males	1.55	17.0
(ii) Adult females	1.25	14.0
Operations Connected with Mechanical Loading or Mechanical Harvesting:		
(8) Operators of mechanical loading or harvesting equipment	2.45	27.0
(9) Grabmen, Spotters, Ropemen	2.25	25.0
(10) Pilers	2.00	22.0
(11) Scrappers	1.85	21.0
(12) Other operations connected with mechanical loading or mechanical harvesting	1.85	21.0

(b) Tonnage Rates

(1) Green sugarcane, per ton:

Variety of sugarcane	Cutting, topping and stripping	Loading	Cutting and loading as combined operation
Co. 290 C.P. 29-103, or C.P. 29-116	$ .80	$ .19	$ .99
All other varieties	.93	.25	1.18

(2) Burnt sugarcane, per ton:

Variety of sugarcane	Cutting, topping and stripping	Loading	Cutting and loading as combined operation
Co. 290, C.P. 29-103, or C.P. 29-116	$ .62	$ .19	$ .81
All other varieties	.68	.25	.93

(c) Rates for Harvesting Operations Performed by Children

(1) For children between the ages of 14 and 16, the rate per day of 8 hours (maximum hours per day for such children) is to be not less than three-fourths of the rates established for adult male workers for a 9-hour day. For a working day shorter than 8 hours, the rate is to be in proportion.

(2) The piece rates for children between the ages of 14 and 16, are to be the same as those established for adults (except that such children are not to be employed or permitted to work for more than 8 hours per day).

The wage determination provides that the piece rate for a particular harvesting operation calculated on a basis other than that prescribed in the wage determination may not result in earnings below the rates per hour or per day specified. The determination also provides that for a working day longer or shorter than 9 hours, the time rate for a particular harvesting opeartion is to be the hourly rate fixed in the determination.

It is further provided that the producer is to furnish the laborer, without charge, the accessories customarily supplied by him, such as a habitable house, a garden plot with facilities for its cultivation, pasturage for livestock, and medical attention.

Office of War Information Office of Defense Transportation Department of Agriculture

The facilities of the 3022 County War Boards of the United States Department of Agriculture will be used to assist farm truck operators, and other operators who engage in hauling farm supplies to and from farms, in filling out applications for Certificates of War Necessity under the Office of Defense Transportation's General Order No. 21, it was announced. The plan, announced jointly by ODT and the Department of Agriculture, will make this assistance available three days this month—October 22, 23, and 24.

Under the Certificate of War Necessity order, all commercial motor vehicles are required to carry Certificates of War Necessity after November 15. Approximately 1,500,000 of the more than 5,000,000 vehicles affected by the Order are used in the transportation of farm products and farm supplies.

Joseph B. Eastman, Director of ODT, explained that the Certificates of War Necessity will govern the miles that may be operated and the loads that must be carried, by all vehicles affected by the Order. Mailing of the applications has been started by the Office of Defense Transportation from its central mailing office in Detroit, Michigan. As the mailing is completed in a particular area, the states and counties covered will be announced. Any operator of a commercial vehicle, including a farm truck, who has not received his application blank when the mailing has been announced as finished in his county should apply to the nearest field office of the ODT Division

of Motor Transport for forms covering his truck or trucks.

The Department of Agriculture has instructed State and County USDA War Boards to set up County Farm Transportation Committees in each of the 3022 agricultural counties to carry on a comprehensive transportation conservation assignment.

The committees' first responsibility in this work will be to give farmers and truckers hauling farm products and supplies from and to the farm all possible assistance in filling out applications for Certificates of War Necessity during the three days of the registration period, which have been designated as National Farm Truck Days. Places where truck operators will be able to receive such assistance will be announced locally.

County Farm Transportation Committees will be made up of five regular and four alternate members to be appointed by County USDA War Boards.

The chairman of the County USDA War Board will automatically serve as a member and as committee chairman. Two other farmers will represent the two most important types of agriculture in the county. In addition, one member will represent the truck transportation services for agricultural commodities in the county and another will be a local dealer of farm supplies.

Headquarters for the committees will be the offices of the County USDA War Boards.

Assisting farmers in filling out applications for Certificates of War Necessity is only the initial job of these committees. Their major responsibility will be to develop farm transportation conservation programs in their areas.

U. S. Department of Labor Wage and Hour Division

Administrative Order No. 162 Appointment of Industry Committee No. 50 For the Sugar and Related Products Industry

1. By virtue of and pursuant to the authority vested in me by the Fair Labor Standards Act of 1938, I, L. Metcalfe Walling, Administrator of the Wage and Hour Division, U. S. Department of Labor, do hereby appoint and convene for the sugar and related products industry (as such industry is defined in paragraph 2) an industry committee composed of the following representatives.

For the Public:
- Theodore J. Kreps, Chairman, Palo Alto, California
- Henry W. Toll, Denver, Colorado
- Kathryn Abbey, Tallahassee, Florida
- Colston Warne, Amherst, Massachusetts
- Harlan D. McCracken, Baton Rouge, Louisiana
- Harold E. Foy, Chicago, Illinois

For the Employees:
- John R. Owens, New York, New York
- Boris Shishkin, Washington, D. C.
- R. E. James, Kansas City, Kansas
- Adolph Lesser, Edgewater, New Jersey
- Lezin L'Hoste, New Orleans, Louisiana
- Louis Goldblatt, San Francisco, California

For the Employers:
- Frank A. Kemp, Denver, Colorado
- Frank L. Barker, Lockport, Louisiana
- J. H. Lind, Jr., New York, New York
- Clarence R. Bitting, Clewiston, Florida
- C. R. Winston, New York, New York
- Ernest W. Greene, Washington, D. C.

Such representatives having been chosen with due regard to geographical regions in which such industry is carried on.

2. For the purpose of this order the term "sugar and related products industry" means:

"The production of sugar, molasses, and syrups, of all types, made wholly or in part from maple sap, sugar beets, sugarcane, sorgo, or any derivative therefrom, and the production of beet pulp, bagasse, lime cake, and related by-products; provided, however, that fountain syrups commonly and commercially so known shall not be included in this definition.

"The production of any products covered under this definition shall be deemed to begin with the leading of the raw materials at the farm."

3. The definition of the sugar and related products industry covers all occupations in the industry which are necessary to the production of the products covered by this definition, including clerical, maintenance, shipping and selling occupations, provided, however, that in a wholesaling or selling department of a manufacturing establishment clerical, maintenance, shipping and selling employees, the greater part of whose work relates to the sale of articles which have been purchased for resale or of articles not covered by this definition, shall not be deemed to be covered by this definition, and provided, further, that where an employee covered by this definition is employed during the same workweek at two or more different minimum rates of pay, he shall be paid the highest of such rates for such workweek unless records concerning his employment are kept by his employer in accordance with applicable regulations of the Wage and Hour Division.

4. The industry committee herein created shall meet at 10:00 A.M. on October 26, 1942 in the College Room of the Hotel Astor, New York City, and, in accordance with the provisions of the Fair Labor Standards Act of 1938 and rules and regulations promulgated thereunder, shall proceed to investigate conditions in the industry and recommend to the Administrator minimum wage rates for all employees thereof who within the meaning of said Act are "engaged in commerce or in the production of goods for commerce," excepting employees exempted by virtue of the provisions of Section 13(a) and employees coming under the provisions of Section 14.

Signed at New York, New York this 5th day of October, 1942.

(Signed) L. METCALFE WALLING
L. Metcalfe Walling, Administrator
Wage and Hour Division
U. S. Department of Labor

Published in Federal Register October 8, 1942

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Average of Sugar Cane Varieties From Test Field Results

(By C. B. Gouaux)

The averages of sugar cane varieties of the Louisiana Experiment Station Test Fields have been tabulated for the commercial field canes that are now in cultivation in the Louisiana sugar cane belt. These results are presented in tables Nos. 1 to 8 inclusive for the eight test fields, which are located on representative soil types of the cane area.

In the first part of tables Nos. 1 to 5 inclusive, the results consist of three, four and five year individual averages of plant cane, first stubble and second stubble of three varieties: C.P. 28-19, C.P. 29-320 and Co. 281, during the seasons of 1935 to 1939 inclusive. The second part of the tables gives data on the following five varieties: C.P. 28-19, C.P. 29-320, C.P. 29-103, C.P. 29-120 and C.P. 33-243, and consists of combined averages of plant cane, first and second stubble for the seasons of 1939 to 1941. The results in tables Nos. 1 to 3, are for Yazoo (sandy land) and one Sharkey (black land) field at Cinclare. Tables Nos. 4 and 5 are for Yahola (very fine sandy land) typical of the Red river soils of the Meeker-Bunkie section.

Table No. 6 gives results for Franklin silty clay loam, a representative soil type of the Teche area, consisting of combined averages of plant cane, first and second stubble for the seasons of 1936 to 1941, of four varieties: Co. 290, C.P. 29-116, C.P. 29-120 and C.P. 29-103; while the second part of the table is an average of three years, 1939-1941, of five varieties.

Table No. 7 gives results obtained on Lintonia silt loam, one of the main soil types of the western section. The data consists of combined averages of plant cane, and first stubble for the seasons of 1937 to 1941, of the following varieties: Co. 290, C.P. 29-116, C.P. 29-120 and C.P.29-320; while the second part of the table gives combined averages of five varieties for the seasons of 1939 to 1941.

Table No. 8 presents results obtained on Lintonia and Olivier silt loam soils of the western area. The information includes combined averages of plant cane and first stubble of four varieties for seasons of 1936-1941; while the second part of table gives similar combined averages of three varieties for the seasons of 1939 to 1941.

The tabulated data gives information on normal juice averages, from big mill tests, and also calculated averages of field yields and sugar per acre figures. The sugar per acre (96 test raw sugar) data are calculated from the AAA compliance table, which is based on the Java formula, using 72.5% Normal Juice Extraction and 97% Boiling House Efficiency.

The data of the eight Experiment Station Test Fields are presented in the following series of eight tables, Nos. 1 to 8 inclusive.

Table No. 1—Cinclare Test Field (1935-1939 Averages) Yazoo Soil

Variety	Plant Cane (4 Yrs.)			First Stubble (5 Yrs.)			Second Stubble (4 Yrs.)		
	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 28-19	12.88	29.10	5087	14.17	26.11	5112	14.20	22.37	4391
C.P. 29-320	12.30	30.12	4985	13.49	26.20	4842	13.75	26.45	4996
Co. 281	12.47	27.49	4624	13.00	20.30	3587	13.00	17.26	3050

1939-1941 (Average of 6 Tests) Yazoo soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-103	12.99	24.22	4275
C.P. 29-120	13.37	23.37	4267
C.P. 28-19	13.06	22.14	3924
C.P. 33-243	12.55	22.77	3860
C.P. 29-320	12.93	21.31	3742

Note: Averages of plant cane 1939; plant cane and first stubble 1940 and plant cane, first and second stubble 1941.

Sharkey Soil (Average 7 Tests)

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-116	12.34	14.23	2364
C.P. 28-11	12.57	11.63	1975

Sharkey Soil (Average 4 Tests)

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-116	12.25	13.11	2159
C.P. 29-103	14.17	10.90	2134
C.P. 29-120	13.36	10.84	1979

Note: Averages of 1938-1941. Averages of 1938, 1940 and 1941.

Table No. 2—Glenwood Test Field (1935-1939 Averages) Yazoo soil.

Variety	Plant Cane (4 Yrs.)			First Stubble (5 Yrs.)			Second Stubble (3 Yrs.)		
	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 28-19	13.05	30.77	5462	14.67	25.27	5158	13.62	19.99	3734
C.P. 29-320	12.60	30.85	5254	13.32	25.71	4677	13.28	21.34	3869
Co. 281	12.31	25.75	4267	12.14	20.48	3336	12.22	14.46	2374

1939-1941 (Average of 5 Tests) Yazoo soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-103	12.49	22.97	3870
C.P. 28-19	13.36	20.24	3696
C.P. 29-120	12.50	21.68	3657
C.P. 33-243	11.87	20.04	3180
C.P. 29-320	11.89	18.93	3010

Note: Averages of plant cane 1939; plant cane and first stubble 1940 and plant cane and first stubble 1941.

Table No. 3—Reserve Test Field (1935-1939 Averages) Yazoo Soil.

Variety	Plant Cane (4 Yrs.)			First Stubble (5 Yrs.)			Second Stubble (4 Yrs.)		
	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 28-19	13.02	29.81	5276	15.05	25.40	5344	14.50	20.28	4082
C.P. 29-320	11.92	29.69	4733	13.38	26.54	4854	12.86	22.87	3391
Co. 281	11.98	28.31	4541	12.10	21.30	3457	11.76	18.92	2970

1939-1941 (Average of 7 Tests) Yazoo soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 28-19	12.42	24.19	4049
C.P. 33-243	11.49	24.79	3785
C.P. 29-320	11.70	22.37	3490
C.P. 29-120	11.82	21.89	3456
C.P. 29-103	11.31	22.56	3382

Notes: Averages of plant cane and first stubble 1939; plant cane and first stubble 1940 and plant cane, first and second stubble 1941.

Table No. 4—Meeker Test Field (1935-1939 Averages) Yahola Soil.

Variety	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 28-19	12.73	33.61	5794	13.33	30.78	5605	13.40	24.81	4545
C.P. 29-320	11.88	36.36	5774	12.75	36.75	6347	12.98	31.31	5523
Co. 281	11.11	27.76	4075	11.16	26.78	3950	11.25	20.26	3017

1939-1941 (Average of 5 Tests) Yahola soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 33-243	10.41	31.83	4284
C.P. 29-120	10.55	29.28	4014
C.P. 28-19	12.36	23.80	3963
C.P. 29-320	11.92	24.63	3926
C.P. 29-103	9.97	23.38	2962

Notes: Averages of plant cane 1939; plant cane and first stubble 1940 and first stubble and second stubble 1941.

Table No. 5—Shirley Test Field (1935-1939 Averages) Yahola Soil.

Variety	Plant Cane (5 Yrs.)			First Stubble (5 Yrs.)			Second Stubble (4 Yrs.)		
	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-320	12.44	37.60	6036	13.33	35.64	6490	14.13	30.38	5930
C.P. 28-19	12.53	34.13	5775	13.38	30.75	5624	13.50	25.08	4637
Co. 281	11.53	32.85	5039	12.57	27.36	4646	11.74	20.61	3228

1939-1941 (Average of 5 Tests) Yahola soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-103	12.85	28.09	4892
C.P. 29-320	12.52	26.79	4528
C.P. 33-243	12.62	25.94	4425
C.P. 28-19	13.62	23.09	4313
C.P. 29-120	12.19	23.12	3785

Notes: Averages of plant cane 1939; plant cane and first stubble 1940 and plant cane and first stubble 1941.

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Table No. 6—Sterling Test Field (1936-1941 Averages) Franklin silt ctiy loam.

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
Co. 290	12.78	29.31	5076
C.P. 29-116	12.47	29.37	4937
C.P. 29-120	14.25	24.46	4824
C.P. 29-103	14.24	24.39	4806

Notes: Averages of plant cane 1936; plant cane and first stubble 1937; first and second stubble 1938; plant cane and second stubble 1939; plant cane and first stubble 1940 and plant cane, first and second stubble 1941.

1939-1941 (Averages of 5 Tests) Franklin silt clay loam

Variety	Sucrose	Tons Per Acre	Sugar Per Acre	Averages of: 1939	1940	1941
Co. 290	12.46	26.47	4450	Plant Cane	Plant Cane and First Stubble	Plant Cane, First Stubble and Second Stubble
C.P. 29-116	12.44	26.13	4382			
C.P. 29-103	14.07	22.41	4352			
C.P. 29-120	13.86	21.38	4077			
C.P. 33-243	13.94	20.65	3965			

Table No. 7—Billeaud Test Field (1937-1941 Averages) Lintonia soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
Co. 290	12.68	25.88	4441
C.P. 29-116	12.32	26.29	4360
C.P. 29-120	14.69	18.27	3734
C.P. 29-320	14.42	17.33	3461

Notes: Averages of plant cane and first stubble (1937-1941 inclusive).

1939-1941 (Averages of 5 Tests) Lintonia soil

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-116	12.32	24.54	4069
Co. 290	12.75	23.40	4041
C.P. 33-243	14.19	20.09	3940
C.P. 29-120	14.70	16.99	3476

Notes: Averages of plant cane 1939; plant cane and first stubble 1940 and 1941.

Table No. 8—Youngsville Test Field (1936-1941 Averages) Lintonia-Olivier soil.

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-116	12.15	20.77	3388
Co. 290	13.05	17.79	3158
C.P. 29-320	14.22	15.31	3010
C.P. 28-11	14.25	14.48	2854

Notes: Plant cane 1936; plant cane and first stubble (1937-1941 inclusive) averages.

1939-1941 (Averages of 5 Tests) Lintonia-Olivier soil.

Variety	Sucrose	Tons Per Acre	Sugar Per Acre
C.P. 29-116	12.46	19.90	3345
C.P. 33-243	13.48	15.05	2739
Co. 290	13.28	15.11	2739

Notes: Averages of plant cane 1939; plant cane and first stubble 1940 and 1941.

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(Office of War Information, War Production Board)

Migratory workers, including farm laborers who move with the harvest from one section of the country to another, need have no fear of being stranded away from home by the advent of national gasoline rationing, William M. Jeffers, WPB Rubber Director, announced recently.

Under present gasoline rationing in the East, and under plans being prepared for the entire nation to conserve the country's auto tires, workers engaged on farms and war construction projects rank as essential workers in the war effort. They therefore are entitled to supplementary gasoline rations to move about as their work requires.

Those now away from home who decide to stay in the areas where they are now working, will be entitled to gasoline rations necessary to enable them to carry on their work, and to get back to their home towns when their work has been completed.

Statistical Summary By Parishes of Production and Distribution of Seed Cane C.P. 34-120

Parishes	Number Orders	Tons Requested	Tons Allotted	Tons Available in Parish	% of Allotted Cane Produced in Parish
Ascension	28	306.5	179.5	58.8	32.7
Assumption	101	599.75	353.25	235.9	66.8
Avoyelles	6	57	34	36.4	107.0
Iberia	41	214	129	123.9	96.0
Iberville	39	233.25	139.75	50.4	36.1
Lafayette	4	55	32.5	87.5	100.0
Lafourche	86	360.5	224.5	103.6	46.1
Pointe Coupee	7	14	8.5	44.8	527.0
Rapides	1	10	6	161.0	2,683.0
St. Charles	3	13	8		0
St. James	41	236	140.5	116.9	83.2
St. John	21	180	106	121.8	114.9
St. Landry	2	5	2.5	4.2	168.0
St. Martin	32	110	63.5	37.1	58.4
St. Mary	4	44	25.5	56.7	222.3
Terrebonne	37	383.5	230	121.1	52.6
Vermilion	5	20	12.5	5.6	44.8
W. Baton Rouge	14	47	29.5	335.3	1,136.6
West Feliciana	0			21.0	
TOTALS	472	2,888.5	1,725	1,722	

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.

Of The Sugar Bulletin, published semi-monthly at New Orleans, La., for October 1, 1942, State of Louisiana, Parish of Orleans.

Before me, a Notary Public in and for the State and parish aforesaid, personally appeared Marcel J. Voorhies, who, having been duly sworn according to law, deposes and says that he is the Editor of the Sugar Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to-wit.

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The American Sugar Cane League of the U. S. A., Inc., New Orleans, La.; Editor, Marcel J. Voorhies, New Orleans, La.; Managing Editor, none; Business Managers, None.

2. That the owner is The American Sugar Cane League of the U. S. A., Inc., New Orleans, La.; W. C. Kemper, Franklin, La., President; John J. Shaffer, Jr., Houma, La., Vice-President; Frank L. Barker, Lockport, La., Treasurer; Reginald Dykers, New Orleans, La., Secretary.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are none.

MARCEL J. VOORHIES,
Editor.

Sworn to and subscribed before me this 28th day of September, 1942.

ARTHUR A. DE LA HOUSSAYE,
Notary Public.

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(My commission expires at death.)

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Some Varietal Stalk Characters of Importance in the Mechanical Harvesting of Sugarcane

(by George Arceneaux, Agronomist, Division of Sugar Plant Investigations, Bureau of Plant Industry, United States Department of Agriculture.)

The rapid increase in the use of mechanical harvesters has been one of the major developments in the Louisiana Sugar industry within recent years. It is anticipated that during 1942 more than 200 machine harvesters will be operated on Louisiana plantations. This represents an increase of more than 50% over the number operated during 1941. As based on the performance of similar harvesters during the past, an estimated 22% of the 1942 crop will be harvested mechanically.[1]

Some stalk characters such as size of barrel and stripping qualities may lose much of their importance under conditions where the cutting and cleaning is done mechanically. On the other hand such qualities as erectness of growth and resistance to lodging will assume greatly increased importance.

During the fall of 1941 a large number of stalks of different varieties were examined, for characters of importance in connection with mechanical harvesting. Results of the study are briefly discussed in this report.

Erectness

A fairly erect habit of growth is a practical necessity in a variety to be harvested with machine now used in Louisiana. Our commercial varieties vary greatly among themselves as to growth habit. C.P. 29/320 and Co. 281 are examples of fairly erect types. Co. 290 will ordinarily develop a characteristic bow in the stalk but, otherwise, will usually stand up fairly well. C.P. 28/19, on the other hand will frequently lodge badly, especially under conditions of moderate to heavy wind, with resulting tangled growth and crooked stalks.

From general observations made during the past, important released and unreleased varieties may be divided into groups ranging from one extreme to the other with respect to erectness of growth or resistance to lodging. There is need however of some system whereby individual varieties may be differentiated with respect to these characters on the basis of objective measurements.

With a perfectly straight stalk the length is of course equivalent to the straight distance from butt to tip. The discrepancy between total stalk length and the straight distance between the two extremities increases with an increase in the crookedness of the stalk; therefore, the extent to which the two values differ may be taken as a measure of crookedness.

Under ordinary conditions there will be a close correlation between departure from straightness and departure from erectness. A plant prostrated by wind or from other cause will either readjust itself to an erect position or will develop a crook in the stalk by reason of the upper section of the stalk growing into an erect position. In exceptional cases where the cane has lodged late in the growing season a prostrate plant may remain in a relatively straight condition until harvest but, in general departure from straightness will afford a fair criterion as to the degree to which the position of the stalk in the field departed from perpendicular.

In the course of studies previously mentioned, 120

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stalks taken at random from each of 15 important varieties in plant cane tests were measured for total length, and also for the straight distance between extremities. The relationship between the two values was determined in each case. Results of this study may be summarized as follows:

Variety	Average Percent difference between total length of stalk and straight distance between extremities (the larger the value the more crooked the stalk)	Ranking
C. P. 33/372	0.59	1
C. P. 29/120	0.60	2
C. P. 29/103	0.97	3
C. P. 33/243	0.99	4
C. P. 34/1	1.17	5.5
C. P. 29/320	1.17	5.5
C. P. 34/120	1.19	7
C. P. 31/529	1.43	8
Co. 281	1.61	9
C. P. 33/409	1.69	10
C. P. 32/206	1.97	11
C. P. 31/509	2.16	12
C. P. 34/21	2.84	13
C. P. 34/80	3.09	14
C. P. 28/19	3.26	15

Among our present major varieties C.P. 29/320 is generally regarded as the one best suited to mechanical harvesting. It is interesting to note that four of the varieties included in this study produced stalks which were somewhat less crooked than those of C.P. 29/320. These included the three most recently released C.P. varieties 29/103, 29/120 and 33/243, and the unreleased variety C.P. 33/372. C.P. 34/120, the variety to be distributed for commercial planting during the fall of 1942 did not differ greatly from C.P. 29/320 in this regard and maintained a position somewhat better than that of Co. 281. On the other hand C.P. 34/21 and 34/80 were approximately in a class with C.P. 28/19.

It should be realized of course that the above is not given as a conclusive ranking of the varieties as to suitability for mechanical harvesting. Under a different set of environmental conditions the position of some of the varieties with respect to the character studied may be reversed. In addition, other characters will have to be considered. It is believed, however, that a ranking of the varieties with respect to erectness of stalk in the field would have followed closely the order as given.

A somewhat better measure of departure from erectness could be obtained by measuring the actual elevation above the ground surface of the point at which the cane is to be topped and comparing the distance with the total length of the stalk. This would give a more direct measure of lodging. It would however, be somewhat more difficult to obtain such measurements.

Variability in length of stalk

Most mechanical harvesters now in common use cut all stalks to approximately the same length at a given adjustment. If the stalks vary appreciably in length most of them will necessarily be topped either above or below the optimum point. Therefore uniformity in length of stalk while of little or no consequence under conditions of manual topping will attain greatly increased importance with the increasing use of mechanical harvestsrs.

In the study mentioned above 30 stalks of plant cane which had been cut and stripped as for milling purposes were selected at random from each of 11 varieties in comparative tests at each of 5 locations and the length of each stalk was measured. The principal purpose was to determine the degree of variability in length of millable stalks as occurring with the different varieties under various conditions.

The variance of a given population (mean of deviation squared) has been extensively used by statisticians as a measure of variability. This is obtained by squaring individual deviations from the mean and averaging the squared values. Table 1 gives the variance of length of stalk as observed with each of 11 varieties of sugarcane at each of 5 stations. The wide differences in mean variance indicate that some of the varietal groups were much more variable than others. By the use of appropriate statistical tests it may be shown that stalks of C.P. 33/243 and C.P. 33/372 were, by all odds, less variable (or conversely more nearly uniform) in length than stalks of C.P. 31/529 and C.P. 34/ 80. Many of the other varietal differences are highly significant.

TABLE 1. Calculated variance (mean squared deviation) of length of stalk as observed with different varieties of sugarcane at different stations.

Variety	Rosewood Plantation	Albania Plantation	Roland Farm	Houma Station	Oaklawn Plantation	Variety Means
C. P. 33/243	56.11	69.93	56.93	67.73	40.24	58.19
C. P. 33/372	38.71	96.31	56.03	61.78	78.76	66.32
C. P. 33/409	60.43	49.41	46.90	91.97	120.28	73.80
C. P. 34/1	59.91	33.93	44.68	92.16	145.14	75.16
C. P. 34/120	51.63	54.55	43.62	115.56	120.66	77.20
Co. 281	38.80	63.05	63.45	119.24	108.07	78.52
C. P. 32/206	59.91	30.10	35.14	161.04	216.59	100.56
C. P. 31/509	49.83	47.83	94.69	211.70	183.38	117.49
C. P. 34/21	25.09	62.03	101.34	134.10	310.38	126.59
C. P. 31/529	94.80	49.55	94.86	183.60	442.59	173.08
C. P. 34/80	67.17	119.45	40.71	376.36	365.96	193.93
Station Means	54.76	61.47	61.67	146.84	193.82	

The limited scope of this study does not, of course, permit sweeping generalizations with respect to the ranking of individual varieties but results obtained so far indicate clearly that varieties may differ

greatly in the degree to which their individual stalks depart from uniformity in length. The importance of recognizing such differences in evaluating seedlings for commercial utilization is obvious.

It will be noted that mean differences in variance between stations varied as much as did the differences observed between varieties. Thus while certain varieties tended to produce more nearly uniform stalks than others, the degree of average variability differed greatly between stations. This indicates that uniformity in length of stalk may be controlled to a considerable extent by controlling the environment. In this connection it is considered significant that the station showing the highest variability in length of stalk also had the most extensive gaps in stand. The reason for this relationship is quite obvious, and gives additional weight to the important business of securing a good stand of cane.

Table 2 gives average values of other pertinent statistics derived from this study.

The standard deviation is the square root of the variance therefore an analysis based on this statistic will lead to essentially the same conclusion as one based on the variance.

TABLE 2. Mean varietal values of certain statistics derived from measurements made on 150 stalks of each of 11 varieties of sugarcane.

Variety	Average length of stalk (Inches)	Standard Deviation	Coefficient of Variability	Average Deviation
C. P. 33/243	75.6	7.63	10.09	6.11
C. P. 33/372	83.7	8.14	9.73	6.27
C. P. 33/409	76.3	8.59	11.26	6.60
C. P. 34/1	80.6	8.67	10.76	6.76
C. P. 34/120	92.7	8.79	9.48	6.28
Co. 281	72.3	8.86	12.25	6.81
C. P. 32/206	75.5	10.03	13.28	7.44
C. P. 31/509	88.4	10.84	12.26	8.23
C. P. 34/21	93.9	11.25	11.98	8.59
C. P. 31/529	82.6	13.16	15.93	9.59
C. P. 34/80	90.4	13.93	15.41	10.25

Given two varieties of sugarcane, one with relatively tall stalks and the other with relatively short ones, and the stalks equally variable in length as measured by the standard deviation the disadvantage suffered from topping to a uniform height will be relatively more serious in the case of the short stalks. (Cutting off 8 inches of millable joints from a stalk 60 inches long will cause a greater percentage loss in yield than will the loss of the same length from a 90 inch stalk). This brings us to a consideration of the coefficient of variability as a possible standard of measure. It is calculated in this case by dividing the standard deviation by average varietal stalk length and multiplying the quotient by 100. Because it expresses variability in relative rather than absolute terms, the coefficient of variability has some obvious advantages over standard deviation in a study of this sort. It is interesting to note that in ranking the varieties on the basis of coefficient of variability instead of standard deviation C.P. 34/120 jumps from fifth to first place among the varieties studied.

The average deviation, as the name implies, is the average linear departure from the mean. It has limited use in statistical analysis but does have the advantage of being readily translated in terms of the basic data. In a normal distribution the value of the average deviation will be approximately 4/5 of the standard deviation but in small populations the ratio may vary up or down from the theoretical value. As illustrated by the data summarized in table 2, the ranking of different population groups according to the standard deviation will not ordinarily vary greatly from their ranking according to the average deviation.

In conclusion it should be emphasized that these exploratory studies have done little more than to indicate an approach to certain problems of varietal selection presented by changes now taking place in the harvest procedure. The results are presented in the hope that they will be of sufficient interest to manufacturers, plantation managers and investigators to help focus attention on the problem of evaluating and selecting varieties to meet the exacting demands of mechanical harvesting.

Summary

The greatly increased use of mechanical harvesters in Louisiana has given added local importance to erectness of growth as a desirable character in a commercial variety of sugarcane. A standard whereby the degree of crookedness in a stalk and inferentially the departure from erectness under field conditions may be measured objectively as illustrated. Of 15 varieties studied C.P. 33/372 and 29/120 displayed the most favorable, and C.P. 34/80 and 28/19 the least favorable qualities when ranked according to the proposed standard.

Most mechanical harvesters in common use top all stalks to an approximately uniform length at a given adjustment, therefore under such conditions uniformity in length of stalk is an extremely valuable varietal character. Highly significant differences with respect to degree of variability in length of stalk were observed between different varieties. C.P. 33/243 and 33/372 showed superior qualities and C.P. 31/529 and 34/80 relatively inferior qualities in this regard. Wide differences observed between comparable lots of cane from different localities indicate that the degree of variability in length of stalk is greatly affected by environmental conditions.

[1]The author is indebted to Mr. J. J. Munson for the information upon which preceding statements are based.

Louisiana Sugarcane Technologists Association Elects Officers

The annual election of officers of the Louisiana Sugarcane Technologists Association was held by mailed ballots this year as a tire-conservation measure.

Mr. Walter Godchaux, Jr., Secretary-Treasurer, has just completed compilation of the ballots and announces the election of the following officials for the year 1942-1943:

Mr. F. Evans Farwell, New Orleans, La., President

Mr. Bronier Thibaut, Napoleonville, La., 1st Vice President

Mr. W. S. Daubert, Cinclare, La., 2nd Vice President

Mr. F. A. Vought, Houma, La., Secretary-Treasurer

Mr. Albert J. Isacks, Houma, La., Chairman, Administration Section

Mr. J. T. Landry, Tallieu, La., Chairman, Manufacturers' Section

Mr. C. B. Gouaux, Lafayette, La., Chairman, Agricultural Section

This is an excellent choice of officials, giving proper representation to the various phases of the Louisiana Sugar Industry and maintaining, at the same time, sectional representation.

The *Sugar Bulletin* congratulates the newly elected officials and feels sure that commendable accomplishments of the organization will be maintained.

Soil-Fertility Investigations On Sugarcane In Louisiana

(By Lester G. Davidson, Assistant Chemist, and Lewis A. Hurst, Biochemist, Division of Sugar Plant Investigations, Bureau of Plant Industry, United States Department of Agriculture)

Soil-fertility investigations on sugarcane conducted by the Division of Sugar Plant Investigations of the Bureau of Plant Industry, U. S. Department of Agriculture, comprise detailed studies of soils and fertilizers as they affect the growth, quality, and yield of sugarcane. In addition to the major elements as fertilizers certain minor elements are also being studied. In Louisiana these studies are being conducted on widely separated plantations* throughout the Sugar Belt, located so as to include all of the more important soil types on which sugarcane is grown. The field experiments are always located on carefully selected, uniform areas of the soil types that predominate on these plantations but, even after careful selection of the experimental fields typical of the various soil types, certain local variations occur that make it necessary to replicate and randomize the various treatments from four to six or more times in order to obtain dependable results.

The data from experiments conducted on individual plantations are assembled after harvest each season and a copy of the report furnished the owner or manager for his information. These reports, which represent data secured during one season only, are not adequate as a basis for recommendations for fertilizer practices in general. Because of local seasonal variations in temperature, rainfall, field practices, and other factors, it is essential that experimental data be secured over a period of several years before any definite conclusion can be drawn or specific recommendations can safely be made with respect to fertilizer practices applicable to given soil types or conditions.

The virgin soils of the Sugar Belt, for the most part, were rich in natural fertility that has persisted over a hundred years of almost continuous cropping to sugarcane and other crops but even with this intensive cropping no outward signs of minor element deficiencies have been noted in soils utilized for production of sugarcane in Louisiana. Minor element deficiencies do, however, occur in the muck and peat land utilized for production of sugarcane and other crops in Florida where, because of their favorable effect on growth and yields, copper and manganese in particular are extensively used in connection with culture of sugarcane on such lands. Minor element deficiencies have been recognized by investigators working with other crops on a wide variety of soils in other sections of the country, and in numerous instances it has been found that the addition of even very small amounts of the deficient elements suffice to correct the deficiency and to restore the crop to normal production. In spite of the apparent absence in soils in Louisiana of deficiencies in minor elements required by sugarcane, an experiment is in progress on the Yazoo soil near Houma to determine the effect, if any, of applications of copper, maganese, iron, and magnesium. Previous experiments with sugarcane in Louisiana on highly organic soils have failed to show significant results with the use of any of the minor elements, but sufficient data have not yet been secured from which to draw any definite conclusions regarding the reaction of sugarcane to application of minor elements under Louisiana conditions.

Soil-fertility and fertilizer investigations on sugarcane over a period of years in Louisiana have indicated that even with its naturally fertile soils and with prevailing soil-improving practices, the use of nitrogenous fertilizer is still necessary to produce a normal crop of sugarcane. These investigations have shown that approximately 36 to 40 pounds of nitrogen per acre is the minimum requirement, particularly with stubble cane, and that profitable results have been obtained with stubble from applications of 60 to 80 pounds of nitrogen per acre, varying with seasonal conditions. The response to nitrogen applied to plant cane is usually greater on Sharkey than on the Yazoo soil, but good response to nitrogenous fertilizers is obtained with stubble cane on all types of soil. On the Iberia and Lintonia soils in the western section, tests have shown evidences of slight potash deficiencies, but thus far in only one or two experiments has the response to potash been significant, and nowhere has the plant symptoms of potash deficiency been noted or reported.

A series of studies is being conducted with some of the newer varieties of sugarcane on the same soil type, with identical fertilizer treatments and cultural practices, to determine the effect of these treatments on the different varieties of sugarcane under the same cultural practices and soil conditions. The different varieties of sugarcane are planted in blocks of five, or more, 1/60-acre plots. The variety blocks are replicated and randomized, and the 1/60-acre plots within the blocks, which are used for different fertilizer treatments, are also randomized with the blocks of the different varieties. Where two soil types occur in proximity to each other, as frequently occurs with the Yazoo and Sharkey soils in the Mississippi first-bottom lands, twin experiments are conducted, using the same varieties on both types of soil. Two experiments of this character have recently been completed—one in the vicinity of Baton Rouge and another near Houma, La. It would appear from these preliminary experiments that with most varieties a greater response from nitrogen may be expected from the Sharkey than from the Yazoo soil. Further experiments, however, are necessary from which to draw definite conclusions or to make recommendations. If it can be determined that certain differences do occur in the fertilizer requirements of different varieties on different soil types, it would be even more valuable to have this information available at the time a new variety of sugarcane is released for general distribution. In order to secure this advance information, the investigations have been expanded, through cooperation with the Agronomy Project, to include fertilizer studies in the regular variety test fields where the most promising unreleased varieties are compared.

The carryover effect of fertilizer applied to plant

cane on the succeeding stubble crop is also being studied. Any such carryover effect would add additional value to the practice of applying fertilizer to plant cane. These experiments include two sets of plots, one fertilizer was different treatments as plant cane, and the other set left unfertilized, but as first stubble the two sets of plots are fertilized alike. Any favorable carryover effect would, of course, occur as increased yields of first stubble on the set of plots fertilized as plant cane in comparison with the set of plots of plant cane that were left unfertilized, with both sets of plots treated alike as first stubble. Preliminary results from three such experiments indicate that a definite carryover effect does take place when plant cane is fertilized.

Other experiments dealing with the carryover effects of fertilizer from one crop to the other include studies where an excess of fertiliber as a 12-4-4 mixture and as nitrogen alone is applied, at the rate of 120 pounds of total plant food per acre, to cane intended only for planting. In the fall cane from plots that were left unfertilized and from plots fertilized with the 12-4-4 mixture and nitrogen alone was planted in replicated blocks which, in turn, were subdivided into 1/60-acre plots that were fertilized the following spring with different mixtures as plant cane, and repeated on stubble. The results thus far indicate that a significant favorable carryover effect is obtained with plant cane the first year by this method, but the effect is apparently insignificant with first stubble. The purpose of these experiments was to determine the carryover effect of fertilizer applied to cane from especially rogued seed plots intended only for subsequent planting.

The first-bottom lands in the Mississippi River basin used extensively for growing sugarcane are close to neutral in reaction, but the higher bench lands in the western section of the Sugar Belt and particularly the soils in the vicinity of Bayou Teche have an acid reaction.

Two experiments with lime on Franklin silt loam, which occurs along Bayou Teche, were concluded last fall with the harvest of second stubble. The purpose of these and other experiments now in progress is to determine the effect on sugarcane of applications of lime to different soils, and also the effect when supplemented with different fertilizer treatments. In these experiments ground oyster shells at the rates of 3 and 8 tons per acre were applied in advance of the planting of soybeans as a cover crop in rotation with sugarcane on replicated blocks with 1/3 of the blocks left unlimed. All the blocks were further subdivided into 1/60-acre plots to which the fertilizer was applied to plant cane and stubble, except that one plot in each block was left unfertilized. One experiment included application of phosphate from different sources and the other application of nitrogen from different sources. The yields from the limed blocks were significantly higher than yields of plant cane from the unlimed ones, but the difference in yields between the 3- and 8-ton applications were not significant. Yields from both first and second stubble with the 3-ton application were significantly higher than the no-lime plots and the 8-ton application was also significantly better than the 3-ton application. The water soluble nitrate nitrogen in the soil was higher on the limed than on the unlimed plots. The percentage of total nitrogen was likewise higher in the juice of the cane grown on the limed than on the unlimed soil.

Another lime experiment with sugarcane was started in 1940 on Lintonia silt loam. As in the two previous experiments, finely ground oyster shells were applied in advance of planting soybeans as a cover crop, which was subsequently turned under prior to planting sugarcane The finely ground oyster-shell lime was applied to replicated blocks at the rates of 1, 3, and 5 tons per acre, with 1/4 of the blocks left unlimed as checks These blocks were further subdivided into 1/60-acre plots prior to the application of the different fertilizer treatments on plant cane. During the growing season samples of the soybeans from the different limed blocks were weighed and analyzed for percentage of nitrogen. Such data thus secured are used for estimating the quantity of nitrogen incorporated into the soil when the soybeans are turned under as green manure. The water soluble nitrate nitrogen in the soil of the field on which this experiment was conducted was also higher on the limed than the unlimed areas. The following fertilizer treatments were applied as a side dressing to plant cane on respective 1/60-acre plots on both the limed and the unlimed blocks: 32-0-0, 20-0-0, 12-0-0, and 12-4-4, at the rate of 300 pounds per acre. These were superimposed as additional treatments on the limed and unlimed blocks, and one plot in each block was left unfertilized as a check.

Application of 1 and 3 tons of lime resulted in an increase of 2 and 4 tons of plant cane per acre, respectively, but only a slight increase was obtained with the 5-ton application. Somewhat similar results were obtained with plant cane in the two previous lime experiments on the Franklin soil, but witth much greater responses to lime at all rates of application on the stubble crops.

Three new lime experiments with sugarcane were started during the present season. Two of them are located on the same plantation in proximity to each other, one on Franklin silt loam and the other on Sharkey clay. These two experiments should permit a comparison of the effect of applications of lime on sugarcane on the two widely different types of soil under the same cultural conditions. The third lime experiment is located on Franklin silt loam on another plantation along Bayou Teche near Jeanerette. In each of these three experiments the lime was applied in advance of the planting of soybeans, as was done with the previous experiments. The soybeans are grown as a cover crop to be turned under in advance of the planting of sugarcane in the fall of 1942.

Another important phase of the soil-fertility investigations comprises studies of the effect of different sources of nitrogen at different rates of application, varying from 24 to 180 pounds of nitrogen per acre. The different sources of nitrogen include nitrate of soda, sulphate of ammonia, cyanamid, urea, cottonseed meal, ammophos, calurea, calnitro, etc. The results secured thus far indicate a slight reduction in yields with the use of cottonseed meal, but with the other sources of nitrogen no significant differences have been found that would justify any recommendation that one source of nitrogen is superior to another. Results of several years' experiments have shown that regardless of the source adequate nitrogen, which is the most essential plant food for sugarcane, is required to produce maximum yields of stubble cane, and even with the turning under of cover crops many fields of plant cane also shows favorable response to nitrogen. The average results over a period of years indicate that for general use a minimum of 36 to 40 pounds of nitrogen, equiva-

lent to approximately 225 to 300 pounds of nitrate of soda per acre, is required to produce a normal crop of sugarcane in the Sugar Belt. As previously stated applications of 60 to 80 pounds of nitrogen per acre may also be profitable on certain fields, but increased yields from applications of nitrogen above 60 to 80 pounds are erratic and generally not economical.

*Acknowledgment is made to the owners, managers, and overseers on these plantations for the hearty support given to this work.

Blackstrap Ceilings

(*Office of War Information Office of Price Administration*)

The Office of Price Administration announced October 27th that it will set specific dollars and cents ceiling prices shortly for beet and cane blackstrap molasses produced at five named United States base point areas. Producers and distributors may use these ceilings as an alternative to their present individual March, 1942, maximums.

This action will solve producer pricing problems on two scores that have been troubling the trade: (1) Many producers did not make deliveries during March, 1942, and thus have no ceiling prices; and (2) producers who did not make March deliveries had ceilings based on contract prices set in 1941.

Since distributors ordinarily make current deliveries throughout the year, their individual March, 1942, ceilings *did* mirror the March market level; hence, no alternative ceilings are provided for sellers at retail and sellers at wholesale whose entire dealings in this commodity during the August 1, 1941—March 31, 1942, period were made in less than tank car lots. OPA is making a study of the blackstrap molasses margins for these wholesalers and retailers. Should this survey reveal that they are suffering hardship from squeezes, proper adjustment then will be made for them.

However, some distributors—generally those selling to yeast, citric acid, or feed manufacturers or to the foundry industry—dealing in larger than tank car lots now *will be* effected by the new ceilings.

The new specific dollar and cents ceilings now will reflect the March distributor price levels. Although such new ceilings will permit some producers to raise their March prices, this increase will have practically no effect on the consuming public because molasses users already reflected the rise in distributors' prices in sales quotations for their products.

The new amendment will apply only to the sales of blackstrap molasses produced in the continental United States. The new amendment will *not* apply to continentally produced blackstrap molasses sold to or purchased by manufacturers of ethyl alcohol, butyl alcohol, and acetone and other solvents.

(Editor's Note: Negotiations are under way between representatives of WPB and the Molasses Committee of the American Sugar Cane League to determine how much blackstrap molasses may be available for purchase by distillers, on what basis, at what price, and other details involving transportation and the participation in the program of all Louisiana producers of blackstrap molasses proportionately.)

Five areas in which blackstrap molasses mills or factories are located and which OPA is using as base points are named as follows:

Area No. 1—Louisiana, Florida, Texas, and Georgia
Area No. 2—New York, Pennsylvania, Maryland, Massachusetts and New Jersey
Area No. 3—Oregon, Washington, and California
Area No. 4—Idaho, Utah, Montana, Colorado, Wyoming, Kansas, South Dakota and Nebraska, excluding Grand Island
Area No. 5—Indiana, Michigan, Ohio, Wisconsin, Minnesota, Iowa, and Grand Island, Nebraska

The new alternative ceilings will be as follows, f.o.b. mill or factory in tank cars, preserving normal trade differentials:

Area No. 1—18 cents per gallon, 42 degrees Baume
Area No. 2—18½ cents per gallon, 42 degrees Baume
Area No. 3—$20.00 per ton of 2,000 pounds
Area No. 4—$24.20 per ton of 2,000 pounds
Area No. 5—$33.20 per ton of 2,000 pounds

Transportation charges at the lowest rate available from the mill producing the blackstrap molasses being sold to the buyer's place of business may be added to arrive at the delivered ceiling, if sales are made on that specific delivered basis.

In setting ceilings by areas for beet blackstrap, notice was taken pricewise of higher quality molasses produced in the mid-western area No. 5 as compared with that in far western and Rocky Mountain areas 3 and 4.

In the case of cane blackstrap molasses, the ceilings set reflect March prices for the standard grade which constitutes approximately 90 per cent of the output. However, high grade grocery trade blackstrap molasses, comprising the remaining 10 per cent of production, ordinarily commands higher prices than the general run. It was not possible to set specific prices for these grades because such differences ordinarily result from the varying amount of care used in the manufacture of cane sugar. Generally, grade is a matter of individual agreement between buyer and seller. However, this grocery grade molasses was sold during March by practically all producers and distributors at prices which reflect the differentials for the various grades of grocery trade molasses over the specific prices set in the amendment for the general run of cane for blackstrap molasses. Thus, employment of prices under the General Maximum Price Regulation on top grades will provide producers and distributors with their normal higher prices for such varieties.

Although beet blackstrap molasses used in this country is produced wholly in continental United States, cane blackstrap molasses is obtained not only from continental United States but also from Puerto Rico, Hawaii and Cuba. However, the Puerto Rican molasses movement has almost ceased recently owing to the shipping shortage. Hawaiian blackstrap molasses is being shipped to this country for use mainly on the Pacific Coast. The entire 1942 output of Cuban cane blackstrap molasses was bought by Defense Supplies Corporation and is being used mainly in the manufacture of industrial alcohol in continental United States.

Blackstrap Sale Stopped

The following wire from Mr. Bourg was received just as this issue went to press.

"W.P.B. ISSUING ORDER PROHIBITING SALES OF LOUISIANA BLACKSTRAP TO MANUFACTURERS OF FEEDS AND VINEGAR WHICH VIRTUALLY CONFINES SALES TO DISTILLERS. ORDER EFFECTIVE NOVEMBER 2ND. PRESS RELEASE EXPECTED TONIGHT (October 30th)".

General Preference Order M-55 Revoked

(Office of War Information, War Production Board)

General Preference Order M-55, which controlled the distribution of direct-consumption sugar for several months before the Sugar Rationing Program was put into effect by OPA, in April, has been revoked by the War Production Board.

All amendments and supplements to Order M-55, and all interpretations of the order have also been revoked.

Order M-55 was issued in December 1941, shortly after Pearl Harbor. In April 1942, WPB directive L-E transferred ration control of sugar to OPA. Order M-55 was continued in effect, subject to modification by OPA orders. Further continuation of Order M-55 is no longer necessary, and, therefore it has been formally revoked by WPB.

WBP's allocation program for raw sugar under Order M-98 is not affected.

The officials order follows:

M-55 to M-55-h, REVOKED

Part 1032—DIRECT-CONSUMPTION SUGAR

Revocation of General Preference Order M-55 and Amendments, Interpretations and Supplementary Orders Thereto

Sec.

1032.1 General Preference Order M-55.
1032.1 Amendment 1.
1032.1 Amendment 2.
1032.1 Interpretation 1.
1032.1 Interpretation 2.
1032.2 Supplementary Order M-55-a.
1032.3 Supplementary Order M-55-b.
1032.4 Supplementary Order M-55-c.
1032.5 Supplementary Order M-55-d.
1032.5 Amendment 1.
1032.6 Supplementary Order M-55-e.
1032.7 Supplementary Order M-55-f.
1032.8 Supplementary Order M-55-g.
1032.9 Supplementary Order M-55-h.

The above order, amendments, interpretations, and supplementary orders are hereby revoked.

Issued this 17th day of October 1942.

Ernest Kanzler
Director General of Operations.

Dr. Arthur H. Rosenfeld

News has been received of the death of that widely known figure in the technical sugar world, Dr. Arthur H. Rosenfeld, which occurred at a Washington, D. C., hotel on the morning of October 6th, 1942. Death was instantaneous and was caused by a heart attack.

Dr. Rosenfeld was widely known in Louisiana through the fact that for about five years, from 1927 to 1932, he was Consulting Technologist of the American Sugar Cane League, being appointed to that post because of his familiarity with the P.O.J. varieties of sugarcane, introduced into Louisiana for the purpose of retrieving the tremendous damage done to the old varieties of cane in this State by the mosaic disease. He came to Louisiana from the Insular Experiment Station in Puerto Rico, but prior to that he had been Director of the Tucuman Sugar Experiment Station in Argentina where the P.O.J. canes had been successfully and profitably introduced some years earlier. Dr. Rosenfeld left Louisiana in 1932 to accept a position with the Egyptian Government and had his headquarters in Cairo.

Last July Dr. Rosenfeld, with his wife and son, left Egypt on a U. S. Army transport, with the United States as their destination, and after following a devious route that took them through Khartoum in the Sudan, Lagos in Nigeria, Natal in Brazil, Trinidad, Puerto Rico and Haiti, the party finally arrived at Miami, Fla., and thence went to the home of relatives in Birmingham, Ala.

Dr. Rosenfeld immediately received a flattering offer from the Dominican Republic Settlement Association, which he accepted, and it was while he was in Washington attending to the necessary visas and passport formalities that his sudden death occurred.

Dr. Rosenfeld, who was 55 years old when he died, will be remembered for his profound knowledge of the sugar industry in all its phases, for his striking personality and his executive as well as scientific ability, and for his poise and intelligence, qualifications which carried him far and which are rarely found combined in one person to the degree that Dr. Rosenfeld displayed. He is survived by his widow, Mrs. Pauline Rosenfeld, 915 South 40th St., Birmingham, Ala., and by his 16 year old son, Arthur H. Rosenfeld, Jr., a student at the Virginia Polytechnic Institute.

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Relationship of Waxy Covering of Stalk of Sugarcane to Loss of Moisture and Inversion of Sucrose in Mill Cane

(By John I. Lauritzen, Senior Physiologist, Division of Sugar Plant Investigations, Bureau of Plant Industry, United States Department of Agriculture)

Introduction

Evidence was presented in earlier publications[1, 2] that sugarcane possesses at least two types of inherent resistance to inversion of sucrose; one resulting from the inhibition of loss of moisture and the other exhibited in the presence of heavy loss of moisture. Certain varieties (C.P. 29/99 and C.P. 29/94) when stored under conditions favoring evaporation showed high resistance to inversion in spite of heavy loss of moisture, while other varieties (C.P. 807, C.P. 28/19, and others) showed considerable inversion when stored under conditions causing a moderate loss of moisture. It was also indicated that resistance to inversion of sucrose could be transmitted from parent to progeny. If the inherent characters that are responsible for any inhibition of inversion could be more definitely identified, it might be possible to breed for more definite characters. To this end, the loss in weight and inversion of sucrose in samples of mill cane (designated untreated cane) during storage at comparable conditions favoring loss of moisture were compared with such changes in similar samples of cane in which the waxy covering of the stalk was mostly removed. The experiments were conducted during two harvesting seasons (1940 and 1941) at the U. S. Sugar Plant Field Station, Houma, La.

Harvesting, Sampling, Treatment, and Storage of Sugarcane

The cane, which was grown at or near the U. S. Sugar Plant Field Station, was cut and topped in the usual manner followed for mill cane but was stripped of all leafy material by hand without the use of a knife. Two methods for selecting samples were employed: (1) Cane of a given variety was placed in a pile with the butts in one direction. A stalk was successively taken from this pile of cane and placed at a number of locations corresponding to the number of samples to be selected. This procedure was repeated until the samples comprised the desired number of stalks. (2) A number of stalks of a given variety corresponding to the number of samples to be used were selected for their similarity in thickness, length, and character, and this procedure was repeated until each sample contained the desired number of stalks. Samples of about equal weight and composition were thus obtained. All samples in the experiments discussed in this paper contained 10 stalks. Representative samples were analyzed (checks) immediately after selection of the samples was completed. The remaining samples were divided into two lots by taking every other sample for each lot. The samples of the one lot were tried and stored without further treatment, and are designated untreated samples. The stalks of the other lot were dewaxed by gently and carefully rubbing off the waxy covering with fine steel wool.[3] These samples were then tied and stored along with the untreated samples at a common level, one layer thick, in a rack in a room

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A Message from

HARRY D. WILSON

Louisiana Commissioner of Agriculture

To the Sugarcane Growers:

The War is on. Every grower, large and small who loves his land can help defend it now. He will defend it by keeping his hand upon the plow and putting his shoulder to the wheel.

Production to the fullest is the war cry—feed our soldiers who are fighting on the sea, on the land and in the air. Feed our workers who are turning out the tools of war—feed our allies who are fighting on our side, and when the harvest comes and we sell our crops and pay our debts, let us use every available dollar to buy War Bonds.

in which fairly constant temperature (approximately 65° F.) and relative humidity (approximately 54 percent) were maintained. The environmental conditions were similar in all experiments. The first and alternate samples in the rack were untreated cane and the intervening samples dewaxed cane. There was sufficient space between the samples to permit of free circulation of air, which was provided by means of a fan attached to a temperature control unit.

In the first 6 experiments 5 samples were used as checks and for each treatment and period of storage (table 1), and in experiment 7 to 10, inclusive, 2 samples instead of 5 were used in each case (table 1 and 2).

The size and spatial relationship of samples, combined with low relative humidity and air movement within the storage room, provided conditions designed to insure heavy loss of moisture and, consequently, to be favorable to inversion of sucrose in most varieties and if possible in all varieties including C.P. 29/94, which had hitherto shown but

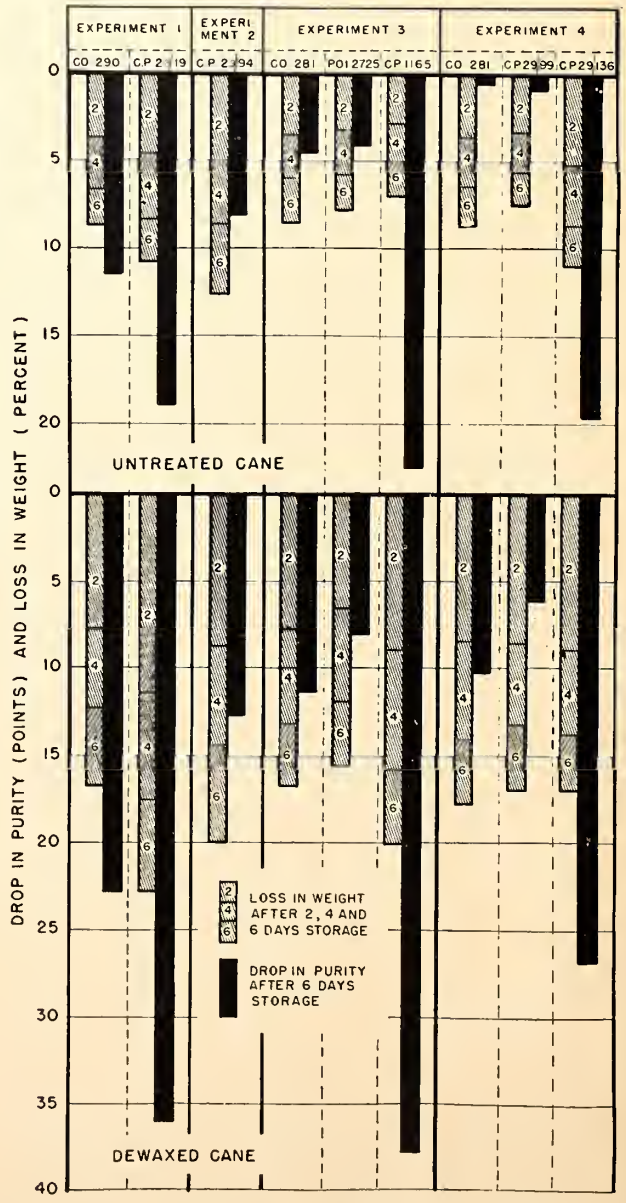

Figure 1.—Loss in weight and drop in purity in untreated and dewaxed cane of different varieties stored at a temperature of 65° F. and a relative humidity of 54 percent in 4 experiments. Period during which experiments were run: Experiment No. 1, October 15 to 21; experiment No. 2, October 17 to 23; experiment No. 3, October 23 to 29; and experiment No. 4, October 29 to November 4, 1940. (See table 1.)

little inversion in any environment in which it had been stored. This environment and arrangement of samples also provided uniform conditions of evaporation for all samples in all experiments. However, because of the difference in maturity, resulting from the difference in time of conducting the experiments and the differences that may have arisen from the difference in location and soil from which the cane originated, the actual values of Brix, sucrose, purity, and weights, and the changes in these values during storage, may not always be entirely comparable from experiment to experiment.

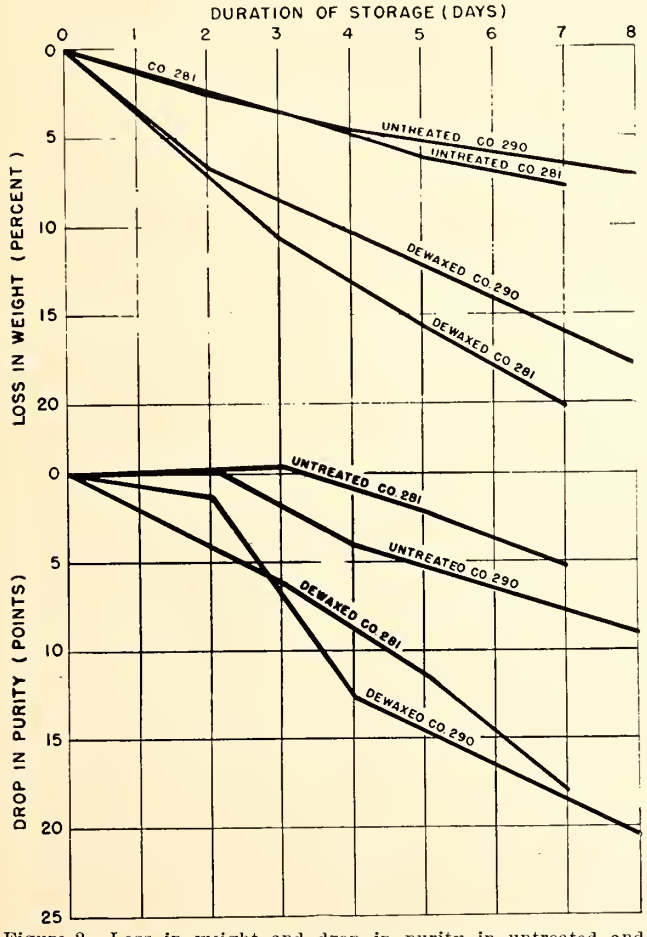

Figure 2.—Loss in weight and drop in purity in untreated and dewaxed cane of varieties Co. 281 and Co. 290 stored at a temperature of 65° F. and a relative humidity of 54 percent for different periods of time. Periods of storage: Co. 281 from November 1 to November 8 (experiment 5, table 1); and Co. 290 from November 5 to November 12, 1940 (experiment 6, table 1).

Experimental Data

The chemical analyses were limited to Brix and polarization readings[4] made in the usual manner[5]. These readings together with apparent purity, apparent purity changes, loss in weight, and juice extraction are shown in tables 1 and 2. Figures 1, 2, and 3 shows the percentages of loss in weight (mostly moisture loss) and drop in purity. The weight loss was determined periodically during storage in experiments 1 to 7 (periodic weight losses in experiment 7 not given), and for the entire storage period in experiments 8 to 10. Chemical analyses were made at intervals in two experiments (experiments 5 and 6, table 1 and fig. 2) and in all other experiments at the beginning and end of the entire storage period.

The rate of weight loss in most instances decreased slowly with lapse of time (table 1 and figs. 1 and 2). In untreated cane of the varieties Co. 281 and Co. 290 there was a slight increase (believed not to be significant) in purity during the first interval of storage (Co. 290, 2 days, and Co. 281, 3 days, experiments 5 and 6, table 1, fig. 2). In dewaxed cane of these varieties there was a drop in purity within these intervals and it was marked in the case of Co. 281 (fig. 2).

The loss of moisture in all samples were extremely large for the length of periods of storage employed. In the case of untreated samples of cane the losses in weight were in excess of what normally occurs in the field or in the windrow in Louisiana. Only under extreme exposure of cane to dry air and winds in the field, millyard, or elsewhere could such losses of moisture be expected. Consequently, because of these heavy losses of moisture in untreated cane, the rate of inversion of sucrose, as indicated by the drop in purity, was greater in most instances than normally occurs in the field or in the windrow. However, such extreme storage conditions provide an excellent means of differentiating varietal resistance to inversion of sucrose and at the same time affords an excellent basis for contrasting the results obtained with those obtained in dewaxed cane.

It is not possible to draw as clear a distribution between varieties on the basis of loss in weight as

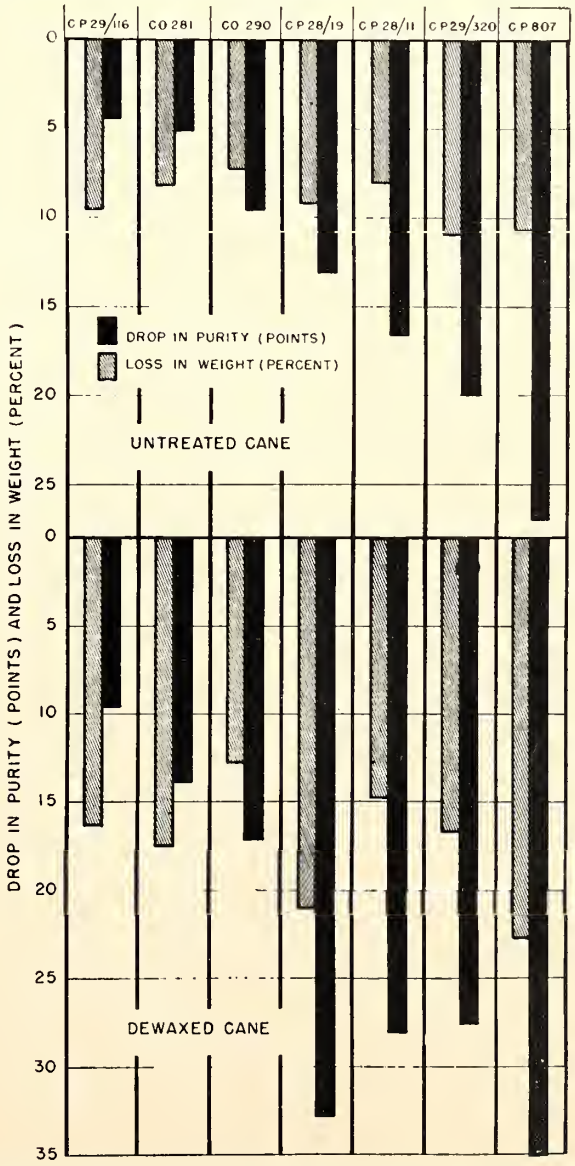

Figure 3.—Loss in weight and drop in purity in untreated and dewaxed cane of seven commercial varieties stored at a temperature of 65° F. and a relative humidity of 54 percent for 6 days from November 6 to November 12, 1940 (experiment 7, table 1).

TABLE 1.—Effect of the removal of wax from surface of the sugarcane stalk on loss in weight and inversion of sucrose in commercial, parent, and certain other varieties of sugarcane when stored at a temperature of 65° F. and a relative humidity of 54 percent.[1]

Variety and Experiment No.	Date of analysis	Duration of storage	Untreated cane						Dewaxed cane					
			Brix	Sucrose	Apparent Purity	Apparent Purity drop	Weight loss	Juice extraction	Brix	Sucrose	Apparent Purity	Apparent Purity drop	Weight loss	Juice extraction
	1940	Days	°	Percent			Percent	Percent	°	Percent			Percent	Percent
Co. 290 (second-year stubble):														
1	Oct. 15	0	15.00	11.82	78.8			61	15.00	11.82	78.8			61
	Oct. 21	6	15.91	10.72	67.4	11.4	8.7	65	17.03	9.53	56.0	22.8	16.7	61
C. P. 28/19 (second-year stubble):														
1	Oct. 15	0	17.14	14.37	83.8			55	17.14	14.37	83.8			55
	Oct. 21	6	19.99	12.97	64.9	18.9	10.7	53	23.35	11.19	47.9	35.9	22.0	48
C. P. 29/94 (second-year stubble):														
2	Oct. 17	0	15.38	11.95	77.7			56	15.38	11.95	77.7			56
	Oct 23	6	17.91	12.46	69.6	8.1	12.6	57	19.19	12.49	65.1	12.6	20.0	57
Co. 281 (first-year stubble):														
3	Oct. 23	0	16.05	13.27	82.7			59	16.05	13.27	82.7			59
	Oct. 29	6	17.31	13.54	78.2	4.5	8.5	56	19.19	13.71	71.4	11.3	16.7	53
P. O. J. 2725 (first-year stubble):														
3	Oct. 23	0	14.01	10.24	73.1			66	14.01	10.24	73.1			66
	Oct. 29	6	15.10	10.42	69.0	4.1	7.8	62	16.16	10.52	65.1	8.0	15.6	62
C. P. 1165 (first-year stubble):														
3	Oct. 23	0	15.47	11.30	73.0			50	15.47	11.30	73.0			50
	Oct. 29	6	17.22	8.69	50.5	22.5	7.0	50	19.41	6.87	35.4	37.6	20.1	48
Co. 281 (second-year stubble):														
4	Oct. 29	0	16.48	13.45	81.6			56	16.48	13.45	81.6			56
	Nov. 4	6	17.35	14.05	1.0	0.6	8.7	53	19.59	13.98	71.4	10.2	17.8	50
C. P. 29/99 (second-year stubble):														
4	Oct. 29	0	17.44	14.68	84.2			58	17.44	14.68	84.2			58
	Nov. 4	6	18.99	15.81	83.3	0.9	7.5	56	20.51	16.01	78.1	6.1	16.9	55
C. P. 29/136 (second-year stubble):														
4	Oct. 29	0	16.56	13.38	80.8			52	16.56	13.38	80.8			52
	Nov. 4	6	18.57	11.37	61.2	19.6	11.0	51	19.49	10.53	54.0	26.8	17.0	48
Co. 281 (first-year stubble):														
5	Nov. 1	0	15.85	13.31	84.0			54	15.85	13.31	84.0			54
	Nov. 4	3	16.23	13.68	84.3	+0.3[2]	3.5	52	17.86	13.87	77.7	6.3	10.8	49
	Nov. 6	5	16.75	13.68	81.7	2.3	6.2	48	18.79	13.61	72.4	11.6	15.7	47
	Nov. 8	7	16.81	13.22	78.6	5.4	7.9	60	19.22	12.64	65.8	18.2	20.3	56
Co. 290 (first-year stubble):														
6	Nov. 5	0	15.71	12.50	79.6			58	15.71	12.50	79.6			58
	Nov. 7	2	16.40	13.10	79.9	+0.3[2]	2.6	65	17.06	13.35	78.3	1.3	6.7	65
	Nov. 9	4	16.41	12.39	75.5	4.1	4.6	65	17.79	11.90	66.9	12.7	10.3	61
	Nov. 12	8	17.25	12.15	70.4	9.2	7.3	61	18.86	11.10	58.9	20.7	18.0	57
Co. 281 (second-year stubble):														
7	Nov. 6	0	17.54	15.46	88.1			53	17.54	15.46	88.1			53
	Nov. 12	6	18.68	15.50	83.0	5.1	8.2	57	19.83	14.71	74.2	13.9	17.5	55
C. P. 29/116 (second-year stubble):														
7	Nov. 6	0	16.79	13.71	81.7			56	16.79	13.71	81.7			56
	Nov. 12	6	18.88	14.59	77.3	4.4	9.6	63	19.63	14.15	72.1	9.6	16.3	60
Co. 290 (second-year stubble):														
7	Nov. 6	0	16.49	13.74	83.3			56	16.49	13.74	83.3			56
	Nov. 12	6	17.09	12.59	73.7	9.6	7.3	64	18.44	12.20	66.2	17.1	12.8	60
C. P. 28/19 (second-year stubble):														
7	Nov. 6	0	18.64	16.33	87.6			48	18.64	16.33	87.6			48
	Nov. 12	6	19.98	14.89	74.5	13.1	9.2	52	23.22	12.70	54.7	32.9	21.0	46
C. P. 28/11 (second-year stubble):														
7	Nov. 6	0	18.04	15.02	83.3			48	18.04	15.02	83.3			48
	Nov. 12	6	19.73	13.16	66.7	16.6	8.1	55	22.03	12.17	55.2	28.1	14.8	54
C. P. 29/320 (second-year stubble):														
7	Nov. 6	0	16.89	14.57	86.3			52	16.89	14.57	86.3			52
	Nov. 12	6	19.38	12.85	66.3	20.0	10.9	50	20.73	12.17	58.7	27.6	16.6	53
C. P. 807 (second-year stubble):														
7	Nov. 6	0	15.19	13.03	85.8			51	15.19	13.03	85.8			51
	Nov. 12	6	16.39	9.63	58.8	27.0	10.7	48	18.94	9.58	50.6	35.2	22.7	53

[1] In each of experiments 1 to 6, 15 comparable samples of 10 stalks of each variety were selected at the beginning of the experiment. Five samples were analyzed immediately as checks, five samples were stored without further treatment (untreated cane), and five were dewaxed and then stored. The check analyses were used as the initial analysis for both groups of stored samples. In experiment 7 only 2 check, 2 untreated, and 2 dewaxed samples of each variety were used.

[2] Plus sign indicates an increase in purity instead of a drop.

it is on the basis of inversion of sucrose. However, mill cane of certain varieties (C.P. 29/94, C.P. 29/136, C.P. 28/19, C.P. 29/116, C.P. 29/320, C.P. 807, and Badila), particularly the first two varieties,[6] normally shows a heavier loss of moisture than Co. 281 and Co. 290 when stored simultaneously under comparable conditions of atmospheric moisture. With the exception of C.P. 29/94, C.P. 29/116, and Badila, these varieties are more susceptible to inversion of sucrose than Co. 281 and Co. 290. C.P. 29/94 and C.P. 29/136 always have been similar in weight loss when stored under the same storage conditions,[7] but are strikingly dissimilar in inversion rate if the storage conditions are dry. C.P. 29/94 is normally highly resistant and C.P. 29/136 is very susceptible to inversion of sucrose whenever the conditions of storage favor loss of moisture. Earlier published[8] and extensive unpublished data indicated that mill cane of the variety C.P. 29/94 might not respond appreciably to inversion of sucrose through the loss of moisture. In an experiment[9] conducted during the harvesting season of 1940 (unpublished data) and in the present experiments (tables 1 and 2), in which the loss of moisture was much in excess of that previously obtained in the same period of time, marked inversion occurred. In all instances the greater amount of inversion was associated with cane harvested earlier in the season. It is possible, therefore, that the very high resistance exhibited by C.P. 29/94 in the early experiments may have been due in part to high maturity. In any case, when the loss of moisture becomes sufficiently great in this variety it shows considerable susceptibility to inversion of sucrose. In experiment 8 (table 2) C.P. 29/94 showed more inversion than C.P. 29/120, which normally shows a resistance similar to that of Co. 290.

The performance of Badila relative to inversion of sucrose in experiment 9 (table 2) is striking, not only in the untreated but in the dewaxed cane, especially in view of the heavy loss of moisture. The results indicate that no inversion occurred in either untreated or dewaxed cane.

The effect of removing the waxy covering from the sugarcane stalk on the loss in weight was profound in all varieties and, with three exceptions, equally profound on inversion of sucrose. The ex-

TABLE 2.—Effect of the removal of wax from the surface of the sugarcane stalk on loss in weight and inversion of sucrose in commercial, parent, and certain other varieties of sugarcane (plant cane) when stored at a temperature of 65° F. and a relative humidity of 54 percent.

Experiment No. and Variety	Date of analysis	Duration of storage	Untreated						Dewaxed					
			Brix	Sucrose	Apparent purity	Apparent drop in purity	Weight loss	Juice extraction	Brix	Sucrose	Apparent purity	Apparent drop in purity	Weight loss	Juice extraction
	1941	Days	°	Percent			Percent	Percent	°	Percent			Percent	Percent
Experiment No. 8:														
Co. 281	Oct. 30	0	16.99	14.17	83.4			58	16.99	14.17	83.4			58
	Nov. 5	6	18.10	14.81	81.8	1.6	6.2	58	19.76	13.77	69.7	13.7	13.7	58
C. P. 29/99	Oct. 30	0	17.34	14.16	81.7			59	17.34	14.16	81.7			59
	Nov. 5	6	19.07	15.03	78.8	2.9	8.7	59	19.85	15.07	75.9	5.8	13.8	60
C. P. 29/120	Oct. 30	0	17.75	14.93	84.1			60	17.75	14.93	84.1			60
	Nov. 5	6	18.22	13.15	72.2	11.9	5.4	61	20.27	11.43	56.4	27.5	12.6	59
C. P. 29/94	Oct. 30	0	15.06	11.03	73.2			61	15.06	11.03	73.2			61
	Nov. 5	6	17.14	9.85	57.5	15.7	13.1	61	17.46	9.61	55.0	18.2	17.4	57
C. P. 29/103	Oct. 30	0	18.91	15.42	81.5			57	18.91	15.42	81.5			57
	Nov. 5	6	20.19	11.07	54.8	26.7	7.6	59	21.74	11.44	52.6	28.9	12.9	59
Experiment No. 9:														
Co. 281	Nov. 4	0	14.62	11.47	78.5			62	14.62	11.47	78.6			62
	Nov. 10	6	15.65	11.56	73.9	4.6	8.1	59	16.85	10.38	61.6	17.0	16.9	57
Badila	Nov. 4	0	14.39	10.40	72.3			61	14.39	10.40	72.3			61
	Nov. 10	6	16.00	11.52	72.0	0.3	11.5	61	17.10	12.58	73.6	+1.3	15.6	61
Kassoer	Nov. 4	0	10.91	6.50	59.6			53	10.91	6.50	59.6			53
	Nov. 10	6	11.30	4.72	41.8	17.8	4.8	52	12.63	2.80	22.2	37.4	12.6	48
Toledo	Nov. 4	0	13.07	7.79	59.6			53	13.07	7.79	59.6			53
	Nov. 10	6	14.15	3.80	26.9	32.7	8.8	49	15.25	2.15	14.1	45.5	16.0	53
Experiment No. 10:														
Co. 281	Nov. 14	0	16.77	13.82	82.4			60	16.77	13.82	82.4			60
	Nov. 21	7	17.94	14.29	79.7	2.7	5.5	55	19.24	14.19	73.8	8.6	13.8	50
C. P. 29/99	Nov. 14	0	17.67	14.58	82.5			57	17.67	14.58	82.5			57
C. P. 29/99	Nov. 21	7	19.38	15.58	80.4	2.1	6.1	56	20.03	15.68	78.3	4.2	11.9	55
C. P. 29/94	Nov. 14	0	16.07	12.09	75.2			60	16.07	12.09	75.2			60
	Nov. 21	7	17.64	12.35	70.0	5.2	9.3	56	19.17	12.89	67.2	8.0	14.8	56
C. P. 29/120	Nov. 14	0	18.18	15.52	85.4			57	18.18	15.52	85.4			57
	Nov. 21	7	19.35	14.01	72.4	13.0	5.6	53	21.10	13.64	64.6	20.8	13.7	51
C. P. 29/103	Nov. 14	0	19.23	15.93	82.8			55	19.23	15.93	82.8			55
C. P. 29/103	Nov. 21	7	20.34	12.72	62.5	20.3	5.0	56	22.28	10.13	45.5	37.3	11.5	54

ceptions are: Badila in the one experiment in which it was included (experiment 9, table 2), C.P. 29/103 in one out of two experiments (experiment 8, table 2), and C.P. 29/94 in one out of three experiments (experiment 8, table2). Badila[10] showed no drop in purity in either untreated or dewaxed cane. C.P. 29/103 showed only an increase in drop in purity of 8 percent over that occurring in untreated cane in one experiment (experiment 8, table 2) but an increase of 84 percent in the other experiment (experiment 10, table 2). The actual drop in purity was extremely large in treated and in untreated cane in both experiments. The increase in drop in purity of C.P. 29/94 was only 16 percent in one experiment (experiment 8, table 2), but was 54 percent in a second experiment (experiment 10, table 2) and 56 percent in a third experiment (experiment 2, table 1). The increase in moisture loss by the end of the final or entire period of storage from dewaxed cane of the different varieties over that occurring in untreated cane of the same varieties ranged from 33 percent (C.P. 29,94, experiment 8, table 2) to 187 percent (C.P. 1165, experiment 3, table 1). Barring the exceptions given above, the increase in drop in purity ranged from 30 percent (C.P. 807, experiment 7, table 1) to 1600 percent (Co. 281, experiment 4, table 1).

The failure of untreated cane of the variety Badila to show any inversion of sucrose in response to heavy loss of moisture is not an isolated case. A similar behavior of one lot of Co. 281 and one lot of P.O.J. 213 (unpublished data), and the above-mentioned high resistance to inversion observed in C.P. 29/94 in earlier experiments, are other examples. However, in none of these cases was the moisture loss nearly as heavy as in the experiments reported in table 1 and 2 or in the one experiment cited (footnote 9) in which considerable inversion was obtained in the variety C.P. 29/94. The behavior of Badila is exceptional in that there was no evidence of inversion of sucrose in either untreated or dewaxed cane, notwithstanding the extremely heavy loss of moisture. If Badila continues to show such resistance, it should be an excellent parent for use in breeding resistance to inversion of sucrose.

The relative values of weight loss and drop in purity in untreated cane of varieties Co. 281 and Co. 290 are more or less maintained in dewaxed cane, although in the one experiment (experiment 7, table 1) in which the two varieties were included, Co. 281 showed both a greater increase in loss of weight and drop in purity.

As a result of dewaxing cane of the varieties Co. 281, P.O.J. 2725, and C.P. 1165, the greatest increase in loss in weight over that occurring in untreated cane took place in C.P. 1165, the next in Co. 281, and the least in P.O.J. 2725 (experiment 3, table 1). The increase in the amount of drop in purity followed the same order. The difference in drop in purity between Co. 281 and P.O.J. 2725, however, was accentuated.

Dewaxing tended to equalize the weight loss between varieties Co. 281 and C.P. 29/99 on the one hand and C.P. 29/136 on the other (experiment 4, table 1). Notwithstanding this equalization, there was a marked difference in drop in purity between C.P. 29/136 and the other two varieties, indicating that Co. 281 and C.P. 29/99 retained considerable resistance to inversion of sucrose in spite of heavy loss of moisture. The loss of moisture of dewaxed

cane of varieties Co. 281 and C.P. 29/99 was nearly equal in two experiments (experiment 4, table 1, and experiment 8, table 2) and slightly different in the third experiment (experiment 10, table 2). C.P. 29/99 showed a considerably smaller drop in purity in each case, confirming early results that revealed this variety to be as resistant, if not more resistant, than Co. 281, although the results in untreated cane were slightly in favor of Co. 281.

In experiment 8 (table 2) the loss in weight and drop in purity in dewaxed cane of C.P. 29/94 was much greater than in that of Co. 281. In experiment 10 (table 2) the loss in weight was slightly greater and the drop in purity slightly smaller in dewaxed cane of C.P. 29/94 than in that of Co. 281.

Co. 281 showed a greater increase in loss of moisture and drop in purity in dewaxed cane when compared with untreated cane that C.P. 29/116 in experiment 7 (table 1, fig. 3). The closely similar resistance to inversion exhibited by untreated Co. 281 and C.P. 29/116 (experiment 7) is exceptional. Normally, Co. 281 is more resistant to inversion of sucrose than C.P. 29/116, whose behavior is usually nearer that of Co. 290. Such exceptional behavior is occasionally encountered in moderately resistant varieties and seems to be associated with some factor of maturity.

In experiment 7 (table 1) the loss in weight in untreated cane of varieties C.P. 28/19, C.P. 28/11, and Co. 29/30 was 9.2, 8.1, and 10.9 percent, respectively, and in dewaxed cane 21.0, 14.8, and 16.6 percent. The drop in purity associated with these values in untreated cane was 13.1, 16.6 and 20.0 points, respectively, and in dewaxed cane 32.9, 28.1, and 27.6 points. In varieties C.P. 28/19 and C.P. 29/320 the drop in purity is correlated with the loss in weight, although C.P. 29/320 showed a greater loss in weight and drop in purity in untreated cane and a smaller loss in weight and drop in purity in dewaxed cane than C.P. 28/19. C.P. 28/11 showed less loss in weight than the other two varieties in both untreated and dewaxed cane, with an intermediate value in drop in purity between the varieties C.P. 28/19 and C.P. 29/320 in cane of both categories. The order of values in drop in purity of untreated cane of the three varieties was reversed in dewaxed cane. Correlated with this reversal of the order of drop in purity is a change in rate in loss of moisture. For example, the differences in the percentage loss in weight of untreated and dewaxed cane of varieties C.P. 28/19, C.P. 28/11, and C.P. 29/320 are 11.8, 6.7, and 5.7, respectively.

The evaluation of these varietal shifts in position relative to moisture loss and inversion of sucrose and the changes in their rate, resulting from dewaxing of the stalk of sugarcane, must remain for future investigations.

Despite the varietal shifts that resulted from dewaxing and the extreme conditions of storage, the varieties normally resistant or moderately resistant to inversion (Badila, Co. 281, Co. 290, C.P. 29/94, C.P. 29/99, C.P. 29/116, and P.O.J. 2725) retained their superiority in resistance, even as dewaxed cane, over the varieties normally susceptible to inversion. The superiority in resistance to inversion of sucrose was exhibited in certain instances when the loss of moisture was similar to, or greater than, that occurring in susceptible varieties. For example, in experiment 4 (table 1) the amount of inversion in dewaxed cane of the varieties Co. 281 and C.P. 29/99 was small as compared with that occurring in C.P. 29/136, although the loss in weight was similar in the three varieties. In experiment 7 (table 1) the drop in purity in dewaxed cane of C.P. 28/11 was much greater than in dewaxed cane of Co. 281 and Co. 290, despite less loss of moisture in the case of C.P. 28/11 than in the other two varieties. The difference in resistance to inversion in these instances would seem to be affected by some other factor than the loss of moisture. This inhibition of inversion in the resistant varieties may be regarded as a type of resistance acting in part independent of moisture loss.

The varieties Co. 281, C.P. 29/94, C.P. 29/99, P.O.J. 2725, and Badila appear to possess this type of resistance to a high degree. Badila thus far is outstanding in this respect. Among these varieties C. P. 29/99, P.O.J. 2725, and Badila appear to be the most resistant to inversion of sucrose, and Co. 281, C.P. 29/99, and P.O.J. 2725 the most resistant to loss of moisture. None of these varieties except Co. 281 are suitable for commercial culture in Louisiana, but if bred with proper breeding stock, should be the source of good windrowing canes.

To combine resistance to loss of moisture with high resistance to inversion of sucrose (resistance independent of loss of moisture) in a windrowing cane would have a three-fold value: Reduction in tonnage loss, reduction in sucrose loss, and reduction in the inversion hazard usually associated with heavy loss of moisture.

Summary

The loss of moisture and inversion of sucrose in normal mill cane was compared with these changes in dewaxed mill cane of 17 varieties during storage at a temperature of 65° F. and a relative humidity of 54 percent.

Dewaxing resulted in an increase in loss of moisture from cane of all varieties tested, the increase varying with the variety.

An increase in the rate of inversion of sucrose resulted from dewaxing cane of all varieties except Badila.

In some instances the greater increase in inversion of sucrose was associated with the greater increase in loss of moisture, but in many instances this relationship was not found.

Although there was some shifting of varietal position resulting from dewaxing, the varieties normally resistant to inversion of sucrose retained their superiority over the highly susceptible varieties. In the one experiment in which Badila was used it showed no evidence of inversion of sucrose either in untreated or dewaxed cane, notwithstanding the heavy loss of moisture in both cases.

Resistance to inversion of sucrose appears to fall into two categories: one that is greatly influenced by loss of moisture and the other acting independently of loss of moisture.

[1]Lauritzen, J. I., Fort, Charles A., and Balch, R. T. Relative Inversion of Sucrose in Mill and Windrowed Cane of Commercial and Seedling Varieties in Louisiana. Sugar Bull. 16 (No. 2, Oct. 15), pp. 5-8, illus. 1937.

[2]Lauritzen, J. I., Balch, R. T., and Fort, Charles A. Resistance to Inversion of Sucrose Sugarcane in Louisiana. 6th Cong. Internat'l. Soc. Sugar Cane Technol. Proc., Baton Rouge, La., Oct. 24-Nov. 4, 1938, pp. 809-818, illus. 1939.

[3]There was no visible evidence of injury resulting from this treatment although it is possible that some injury may have been present. Although great care was exercised to treat all cane alike, it is possible that the treatment was not uniform from variety to variety and from experiment to experiment. Other methods of removing wax were tried but none was found satisfactory. Because the immediate effect of wax removal by the method employed was moisture loss, it is believed that this treatment served the purpose intended, that of increasing the loss of moisture over that occurring in untreated cane.

[4]The Brix and polarization readings were made by John Lucius Burk and Lester G. Davidson, to whom the writer is indebted.

[6]Lauritzen, J. I., and Balch, R. T. Storage of Mill Cane. U. S. Dept. Agr. Tech. Bull. 449, 30 pp., illus. 1934.
[6]See footnotes 1 and 2.
[7]See footnotes 1 and 2.
[8]See footnote 2.
[9]This experiment was conducted at the same time and in conjunction with experiment 2 (table 1) and from the same lot of cane. The cane was stored at relative humidities from 54 to 98 percent at 65° F. The greatest weight loss was 24.6 percent after 14 days.
[10]The 0.3 drop in purity of untreated cane is not regarded as significant.

Amendment No. 4 to M-54

(Official release)

To maintain output of critically needed war alcohol, use of Louisiana molasses produced after November 2, 1942, for making mixed feed, vinegar, ensilage, and direct feed is forbidden by Amendment No. 4 to General Preference Order M-54, issued by the Director General for Operations.

Purpose of the amendment is to channel molasses produced in Louisiana into alcohol plants in that area. Other feeds can be substituted for this quantity made from molasses, and molasses from other parts of the country can be pressed into service for other uses affected by this order.

Diversion of shipping from the Gulf molasses trade has reduced the amount of molasses coming in over the water. To insure continued full production of alcohol in this area, it is desired that all local molasses be made available.

The amendment provides that no producer may deliver molasses made in the State of Louisiana after November 2, 1942, unless he shall have received from the person accepting delivery a certificate stating that the molasses is not to be used in making the prohibited products.

Alcohol is needed urgently in the production of a wide variety of munitions and other war products, including synthetic rubber. About 8,000,000 gallons per year are produced in this area. The amendment follows:

PART 1031—MOLASSES

General Preference Order M-54, as amended March 27, 1942, Amendment 4

Paragraph (c) of 1031.1 General Preference Order M-54, as amended March 27, 1942, is hereby amended by the addition of a new subparagraph (5) reading:

(5) Except as specifically authorized by the Director General for Operations, no producer shall deliver any molasses produced in the state of Louisiana after November 2, 1942, unless he shall have received from the person accepting delivery a certificate in substantially the following form:

The undersigned hereby certifies to the War Production Board and to his supplier that the molasses hereby ordered will not be used or resold by him for the manufacture of mixed feed (including custom grinding), for the manufacture of vinegar or for ensilage or direct feed.

.....
Name of Purchaser

By..... Title
Duly Authorized Official

Where the molasses produced in the state of Louisiana after November 2, 1942, is mingled by the producer with other molasses owned or held by him, this paragraph shall not prevent such producer's selling molasses from such mingled stock without requiring such certificate where the amount delivered does not exceed the amount held by him on November 2, 1942.

Issued this 2nd day of November 1942.

Ernest Kanzler
Director General for Operations

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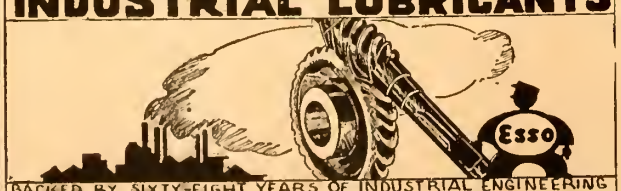

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 21 NEW ORLEANS, LA., DECEMBER 1, 1942 No. 5

Address of Harry D. Wilson, Louisiana Commissioner of Agriculture, Over Station WWL, New Orleans, in Behalf of Harvest War Bond Sales Campaign—November 14, 1942

My Friends on the Farms of Louisiana:

You are a great part of a great nation. Every man and woman who turns a furrow and wields a hoe, or picks a pea is as essential to the success of this country as a man who threads a screw or loads a shell. Some of you may be living in a remote and out of the way place, some of you may plow only one mule, you may be a landowner or tenant, but no matter where you live—no matter how small nor how big your farm is the nation needs your help. The excess products of the farm, after feeding the family, is all that we have to feed our nation and feed our allies, and therefore it is tremendously important that you fully realize the need for the fullest production of the best quality commodities.

The farmers of this nation have a great responsibility. They have been asked to do more than ever with less labor and fewer tools to do with. During the depression the farm home was a shelter and haven for the unemployed. The farm children who had found employment in office and factory in the city found themselves without a job. The plant shut down and the office closed. Back to the farms they trudged. The farms of the nation were the steadying influence at a critical time—too much produce for the markets—too much labor on the farm—land with an acreage quota was sought after—Acreage of sugar cane, corn, wheat, potatoes, rice, cotton and tobacco were reduced. Warehouses were running over and the price was down. Now the picture has changed—the high wages of the factory and war plants has drawn heavily upon farm labor, and thousands of the best young farmers have been inducted into the army. Labor is scarce, new farm equipment is scarce and hard to get, and yet you my farm friends are being called upon to produce more and more.

Some of our most important foods will be rationed. There is a good market for all commodities.

It is a tribute to the farmers of this land that they have always come through with flying colors upon every call our government has ever made—they have never failed. Even with the discouragements of drought and flood and pestilence—they will not fail now. Every man to his plow—every woman to her kitchen—there is no fooling around on the farms today.

The season has been good—the harvest is bountiful. The first duty of every good citizen of the land is to produce abundantly of those essential war foods—You have been rewarded by the government for building up your soil. You have stored the precious plant food into your soil through good farming practices and have received soil building benefits from the government—Now we need this increased fertility and must reach down into the good earth to get it. Much of the factory-made nitrogen we have used for fertilizer must go into gun powder.

Therefore, the most essential and urgently necessary job of the farms is to produce the foods and fibers so badly needed by ourselves and our allies.

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans

Marcel J. Voorhies, Editor
Issued on the 1st and 15th of each month. Official Organ of the American Sugar Cane League of the U. S. A., in which are consolidated
The Louisiana Sugar Planters' Assn.
The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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That's your business—that's your profession—I know you will do it.

Farmers who have had mortgages know how hard it has been to pay interest and reduce the mortgage. During the depression many farmers had to go deeper in the hole, and many of them needed repairs that could not be financed. Farmers will no doubt be the first to see an opportunity to reduce the farm debt and stop paying interest. This is no time to add on debts—this is the time to pay debts while all farm products are bringing a good price.

Good earth has always been the best mortgage risk in the long run. Sometimes land sells slowly, but lands will not run from under you on *one* excited session of the market, and so much of our good farm land is under mortgage. Now is a good time to reduce that mortgage as much as possible. After debts are reduced to a safe basis then farmers should join hands with all the balance and buy war bonds.

Money invested in war bonds is a safer investment than in improvements and repairs. The farmer wants to make improvements and repairs. He likes to see a good roof on the barn—he likes new fences set on a straight line—he takes pride in these things, just like a city man takes pride in his lawn. But if the farmer purchases these new roofs and new fences now he is competing with the war needs and helping also to increase prices through competitive buying.

Inflation ruins farmers just like it ruins everybody else—boom prices today and no price next year hurts farm people—so postpone all repairs and household purchases to the very smallest so as to hold down inflation—invest in war bonds and then after the war these bonds will not only buy much more, but will help keep labor employed, factories running and therefore keep active buyers for food and fibers. If factories stop the market halts for farm produce. Therefore, any bonds bought now, not only creates a reserve of cash for the hard days ahead, but money in bonds creates a bank of purchasing power for the post-war period.

The United States Treasury has spoken frankly to us and has said that this surplus money must come into the Treasury to pay for the war in one of two ways—it must come through sale of bonds or come through taxes. Therefore, the more bonds we buy the less taxes we pay.

The Treasury has set-up a War Bond Purchase Committee in every parish in Louisiana. This committee with the help of the Agricultural agencies and workers will put on a special harvest drive to sell war bonds to farm people. Every producer—landlord or tenant—big or little—white or colored, is to be canvassed. This special campaign is timely—it is a harvest campaign and I have no doubt that the farm people will come through with a tremendous subscription to war bonds. The good people of Louisiana have done a good job up to now—let's keep up the good work.

A very unusual thing happened on October 3 in one of the small towns of our good neighbor state. The thing was so unusual that the ears of the nation were turned to Walthall County, Mississippi. The thousands of farmers of that rural South Mississippi County met at Tylertown and invited Secretary of Agriculture Claude Wickard, the most prominent man in agriculture in the United States, to meet with them—what for? Well, to give thanks for the bountiful harvest—they called it the Food for Freedom Thanksgiving Harvest Observance. It was such an appropriate thing that the idea is being taken up elsewhere, and there is to be a Harvest Thanksgiving in many localities from coast to coast, including a number in Louisiana. This spontaneous expression of thanks on the part of farm people should insure the success of the Harvest Bond Purchase campaign which the United States Treasury is sponsoring here in Louisiana. The Harvest Thanksgiving and Harvest Bond sale should go hand in hand.

There is a War Bond Purchase committee in every parish in Louisiana, and this committee will be assisted by farmers and agricultural agencies in all the parishes—now is the suitable time for this campaign, and I hope that every farm family in Louisiana will take part by buying War Bonds.

I am very proud of the record that Louisiana holds. I am informed by reliable source that the State of Louisiana was second in the nation for the month of September in the percentage of war bond sales quota accomplished. If every person in Louisiana, including the farmers, will make an all-out effort, it is possible that Louisiana will be the first in the nation.

War bonds are a good investment—when these bonds are no good, dollar bills are no good. They are as sound as any other government obligation and let every citizen of Louisiana buy to the limit.

Paragraphs From The National Capital

(*By C. J. Bourg*)

The negotiations for the purchase of the 1943 Cuban crop have proceeded to a point where it is believed that decisions are being made. Prominent Cubans have come to Washington to see Secretary Hull, and there are reports that President Batista will be a guest at the White House.

* * * * *

Since the African compaign, there has been much discussion about the possibility of disposing of considerable quantities of Cuban sugar among the Allied troops and natives of northern Africa. Also there is the question as to whether, like Hawaii, the Cubans will get the benefit of boats returning from Africa in ballast. We hear that considerable raw materials are being brought from Africa, and it may be that there will be few empty available returning boats.

* * * * *

In this general vein, the President has announced to the world that he will feed all people as their country is restored to them. This will start with northern Africa; but, if Europe is invaded, it will mean whatever countries we are able to rescue from invasion. The significance from the standpoint of sugar depends upon your imagination and your confidence in the success of Allied arms.

* * * * *

The new draft regulations are intended to be very helpful in the case of farm labor problems, and it is recommended that each grower who has labor problems immediately contact his local board. It would be a good idea if a committee called on the State Selective Director to make sure that sugar workers are recognized in the midst of the harvest and to make plans for next year.

* * * * *

The plan now is that edible molasses will be transferred from the Chemical Division to the Sugar Section of WPB. Blackstrap and beet molasses will continue to be under the Chemical Division.

* * * * *

The Amendment to M-54, which became effective November 2nd, prohibits selling Louisiana molasses "for making mixed feed, vinegar, ensilage, and direct feed."

This Amendment does not prevent a planter from using molasses for his own mules and other livestock. If he has made ensilage or feed for his own uses in the past, he may do so now. The language of the Order is that "No producer shall *deliver* any molasses * * *."

The Amendment obviously permits the sale and delivery of blackstrap and edible molasses for any purposes outside of those named, as above quoted; therefore, producers of edible molasses are not affected in their sales for other purposes.

* * * * *

On the proposition whether a producer who had sold molasses to his cane growers for use in feeding their mules would be allowed to continue this custom, in view of the recent prohibition against selling momolasses for feed, the Chemical Branch of WPB has made the following written ruling:

"Under the terms of the molasses order it would not be permissible to sell to cane growers molasses manufactured after November 2; however, this matter can readily be adjusted. Practically every plantation has either some old crop molasses or produced some prior to November 2. If this is insufficient to take care of the requirements for local stock and cane growers' mules, then application should be made to this office for an exception. The producers sells directly to the farmer consumer and is a Class 7 Purchaser. If the plantation will indicate their sales for direct feed during the base year, then we feel certain that we can grant an exception to the extent of this quota. The factory should also include inventory of molasses manufactured before November 2."

It is evident from the above that any molasses produced prior to November 2, 1942 can be sold to the cane growers. As considerable molasses was produced in October, this will undoubtedly prove the best means of taking care of neighboring growers.

Industry's Friend

(*By C. J. Bourg*)

A proven industrial friend of Louisiana sugar received recognition in the October issue of the *Farm Implement News*. Coming at a time when Louisiana growers are experiencing great difficulty in obtaining laborers to harvest the crop and when the more than 150 cane harvesters of all types and designs are being operated to fill in the manpower gaps brought about by the labor shortage, the Louisiana sugar industry will be pleased to read the article which appeared in the trade journal of the farm machinery manufacturers concerning Byron C. Thompson of Labadieville, the story of whose connection with Louisiana sugar is detailed in the following article. In addition to the article there appears in the magazine four pictures of the cane harvester, the cane cultivator, and the row plow, produced by Mr. Thomson.

He Mechanized Cane Production

For 25 years, B. C. Thomson—dealer-manufacturer—has given Louisiana sugar cane growers the equipment they needed even if he had to invent it, as he did.

Until rationing came along, cane sugar to most of us was something the corner grocer always had on hand for discriminating customers, but it is a far more important item to Byron C. Thomson of Labadieville, Louisiana.

Leaders in the Louisiana sugar cane industry paused briefly, Sept. 24, to honor this dealer-manufacturer who has contributed so much for their benefit. The Allis-Chalmers Mfg. Co., with whom Thomson has been associated during much of this quarter-century, presented him with an engraved silver cup in appreciation of his unusual pioneering in this small but vital field.

When Thomson first came to the sugar cane parishes 25 years ago, two things impressed him strongly: First, the critical need for power equipment in the heavy duty work of the cane fields, and second, the lack of equipment to meet that need. Ordinary equipment simply couldn't be adapted to this extraordinary crop, planted in rows 6 feet apart and towering to more than twice the height of a man. More than this, the rows had to be worked up into large ridges, with water ways between, to secure proper drainage. Since the sugar cane is limited by climate and soil to the southern part of Louisiana, only twenty-two parishes (counties) in all, the crop and tillage needs were little understood in farm equipment manufacturing centers.

Thomson saw that if he was to be of real service to his customers, he would have to be more than a conventional good dealer selling them the best that was available. He would have to make or have made the equipment they needed to take the excessive hand and horse labor out of sugar production, amounting even then to 250,000 tons a year. During the past 25 years he has followed both courses, building equipment when it was practical, and helping others to design and build it when they could do it cheaper and better.

First, he set to work to develop a "row plow", a combination of plow bottoms and coulters which would "reverse" one of the 6-foot cane rows in one operation, eliminating the labor of double plowing to get the desired tillage and to throw up the ridges for the coming cane crop. By the end of the war, he had his row-plow perfected and on the market. But just as it was being accepted by the plantation owners, a double curse hit the cane belt—low prices and mosaic disease.

Thomson stuck to his job, however, adding other agricultural lines to carry him along. His tenacity was rewarded when new disease-resistant varieties of cane began to put the Louisiana sugar business back on its feet. But he saw that the cane growers needed more than his row-plow. They needed tractors especially built for their conditions, and a whole line of special matched tools for cultivating as well as preparing the ground.

He took his problem to Milwaukee to Allis-Chalmers. There dealer, sales executives, and engineers worked together to design a sugar cane tractor. Finally, the first carload of sugar cane cultivating tractors rolled south to the waiting cane belt. Of course, those first machines were not perfect, but Thomson and Allis-Chalmers continued to work together to improve this curious-looking high-clearance machine. After several changes, this tractor, coupled to Thomson's row-plow was accepted by the growers as a cheaper, practical way to plow out cane stubble and plow under legumes used as rotation crops. As yet, however, it gave them no help in cultivation.

Thomson met this need by obtaining some extra heavy disk gangs and designing a high arched frame to hold the gangs in working position behind the tractor. This made a cultivator with both clearance and strength enough for real power cane cultivation. But before the rig was really practical, one more feature had to be developed—a special power lift heavy enough to raise this bulky heavy-duty equipment. Again, Thomson and Allis-Chalmers worked together on the problem, and by the end of the first season after the introduction of the cultivator, they had devised a crane-like hoisting frame to do the job.

This pioneer cane cultivator tractor, the heavy duty "UC" cane special, was followed by two smaller machines, first the medium-weight "WC", and finally, in 1938, the light-weight "WB," offering practical power for the smaller cane grower and auxiliary power for the big plantations.

To extend the usefulness of these tractors, Thomson also built a high-speed all-steel cane wagon, enabling growers to eliminate time-wasting mule power in hauling the cut cane from fields to railroad siding or direct to sugar mill.

But there was still one big bottleneck in cane growing; harvesting was still an expensive hand operation. For years, various inventors had been struggling with the problem of a machine to eliminate hand cutting, but their workable creations were all too heavy, expensive, and complicated. Some actually weighed as much as 30 tons. Thomson too had been working on the problem, applying the same thoroughness and persistency he had used in pioneering other sugar cane equipment. Finally, in 1939, he demonstrated the first successful harvester, the "Hurry-Cane", a self-propelled two-row machine which cut the crop and laid it in windrows. Later, he added a topping attachment. This machine, powered by an engine developed by Allis-Chalmers, performs the work of more than 100 trained cane cutters. In 1941, production of one-row models was begun.

Today, Thomson's machines, mechanizing the production of Louisiana sugar cane from unplowed field to cane mill, are doing more than helping his plantation customers; they are helping us all get submarine-proof cane sugar. Everyone with a ration card can share in the celebration of this unusual dealer's 25th anniversary.

Freight Rates

Mr. Marcel J. Voorhies, General Manager of the American Sugar Cane League, has been appointed on a committee to investigate unpublished freight rates for the Louisiana sugar producers. The following letter is self explanatory.

Nov. 13, 1942.

Mr. John C. Geran
Administrative Assistant
Defense Supplies Corporation
33 Liberty St.
New York, N.Y.

Dear Mr. Geran:

During your visit to Louisiana recently, your inquiries developed that published freight rates did not exist from all of the Louisiana raw sugar producers to the closest refinery freightwise. Your contact with the Louisiana Public Service Commission also established that it was not possible to secure published freight rates in every instance.

While Circular Letter to Refiners of Louisiana Raw Sugar Nos. 1 and 2 are predicated on published freight rates, you have indicated that the Defense Supplies Corporation, in fairness to the industry, would probably have to arrange to accept fair and reasonable unpublished freight rates in lieu of actually published freight rates when the latter are not available.

In reference to your phone conversation of Monday, Mr. Wallace C. Kemper, President of the American Sugar Cane League, Mr. Clifford Pierson, of the American Sugar Refining Co., and the writer accede to your request to serve on a committee to look into cases where published freight rates are lacking but where legitimate and practical freight rates can be determined, and to recommend, through you, to the Defense Supplies Corporation such rates to be fair and equitable. These recommendations will of course be made only where published freight rates are not available.

Yours very truly,
Marcel J. Voorhies,
General Manager.

Weekly Cane Settlements

The following letter has been sent to the Louisiana sugar producers by the A.A.A.

To: Louisiana Sugar Mills and Parish Administrative Officers in Sugarcane for Sugar Parishes
Subject: Settlement for Blackstrap Molasses Under the Fair Price Determination

The question has been raised by several Louisiana processors who make sugarcane settlements in full on a weekly basis, whether settlement for molasses might not also be made on a weekly basis.

We have been advised by the Sugar Agency that the phrase, "the average price per gallon of blackstrap molasses, as quoted by the agencies set out above for the period there specified", permits settlement under the molasses provision to be made either on the basis of the weekly figures or the season, whichever option may have been elected for settlement purposes.

We regret if there has been any confusion surrounding the interpretation of the determination in this respect.

Signed G. J. Durbin
Administrative Officer In Charge

Cane Trash

The Grower-Processor Committee of the Louisiana sugar industry met November 17th at the Agricultural Building, Thibodaux, La. Those were present:

Mr. W. F. Giles, Chairman, presiding, Mr. Warren Harang, Mr. Lionel Kling, Mr. J. J. Shaffer, Jr., Mr. Frank L. Barker, Mr. J. J. Munson, Mr. R. M. Murphy, Mr. W. C. Kemper, Mr. E. W. McNeil, Mr. E. A. Burguieres, representing Mr. Jules Burguieres and Mr. L. G. Girard and Mr. M. J. Voorhies, visitors.

The meeting was called because Mr. W. M. Grayson had received a telegram from Dr. Joshua Bernhardt in which Dr. Bernhardt requested that the industry recommend a basis for the settlement of cane with reference to a deduction for trash depending on the category in which the cut cane would be placed; for instance machine cane cut top and bottom and burned, machine cane cut top and bottom and not burned, hand cut cane cut top and bottom and burned, hand cut cane cut top and bottom and not burned, and clean cane.

It was pointed out that in September the Committee had met and decided that trash could only be determined by installing proper machinery at each mill, and that this is impractical now. When the war ends each mill will be in a position to equip itself and proper trash determination can be made. The industry has instructed the Committee not to consider trash this year for incorporation in the Fair Price Determination. The Grower-Processor Committee decided that it does not have sufficient information to establish an average per cent trash, which would be representative of the industry. The Committee agreed that they had no objection to a settlement being reached that is mutually satisfactory to both grower and processor, based on actual weight tests, in individual and isolated cases provided no precedent would be set for the future by such settlements.

Edible Molasses

No special price regulation will be issued by the Office of Price Administration on edible molasses produced in Louisiana this season, it was announced recently by the OPA. Therefore, the producers must continue to use their March 1942 ceilings under the General Maximum Price Regulation.

This announcement was made by OPA in order to dissipate any trade uncertainties between buyers and sellers, which might hold up business. Types of edible molasses generally used include first molasses (the result after the first extraction of sugar) and second and "boiled back" molasses (results after the second extraction of sugar).

Sugar Distribution

OFFICE OF PRICE ADMINISTRATION
Washington, D. C.
November 25, 1942

To All Primary Distributors of Sugar:

In order to enable railroads to haul a greater quantity of freight with their existing equipment, the Office of Defense Transportation recently issued General Order ODT 18, which imposes certain restrictions and requirements on both rail carriers and shippers with regard to the shipment of carload freight.

Numerous requests have been directed to this Office for interpretations of this Order as it applies to shipments of sugar. In order to clarify these matters, we have consulted the Office of Defense Transportation and have set forth herein a few guides to primary distributors of sugar in order to assist them in meeting the requirements of the ODT Order.

It is provided in the Order that freight cars must be loaded with a quantity of freight which equals or exceeds in weight the marked capacity of the car, except in the case of a tariff minimum carload shipment of any commodity which has been allocated or limited by Government regulation, including sugar. This latter provision or exception, however, is qualified with the further provision that the consignor before shipping a tariff minimum carload shipment shall have first attempted, in good faith, to avail himself of the provision of Sections 500.25 and 500.26 of the ODT Order which in effect call for arrangement of "stop-off" and "consolidation" respectively.

In the case of stop-off shipments, it is first essential to clarify the matter of the sugar price ceiling in the case of a delivery by means of a stop-off. Price Schedule No. 60 provides that the maximum delivered price for the various sugars at any point shall be the applicable maximum basis price, plus the transportation charges per one hundred pounds on a shipment of identical quantity from the refinery nearest freightwise to the point of delivery. Thus, if the quantity of sugar to be delivered at the stop-off point is equal to or in excess of the amount of sugar upon which the "selling prepay" or "freight application" from the refinery nearest freightwise is based, the shipment of that quantity by means of a stop-off would result in a price violation, unless the shipper absorbed the stop-off charge and any additional freight charges involved. However, if the amount to be delivered by means of a stop-off is less than the tariff minimum upon which the freight application is based, the buyer may pay the amount of the stop-off charge and additional freight charges,

if any, provided the payment of such charges does not result in a delivered cost to the buyer in excess of the cost which the buyer would be compelled to pay on a shipment of identical quantity from the refinery nearest freightwise, by the mode of transportation on which the freight application is based. For example, if the prepay at a point in Pennsylvania is 20 cents based on a 400-bag tariff minimum rail rate from Baltimore, Maryland, an amount less than 400 bags in a stop-off car may be shipped to a buyer at such point from any point in Zone 11 or 12, provided that the amount of the stop-off charge and any additional freight charge would not result in a total cost to the buyer in excess of the cost entailed in shipping a similar quantity from Baltimore by rail. In determining the cost to the buyer on a shipment of "identical" quantity, take the lower of (1) the actual cost at the "less than carload" rate on the quantity to be delivered, or (2) the total cost of shipment of a tariff minimum carload from the refinery nearest freightwise.

Consolidation shipments or shipments of two or more tariff minimum carloads in a single car, are practical only in those instances where the tariff minimum carload is 40,000 pounds. However, in those cases where consolidation shipments are possible, it is urged that they be used to the fullest extent possible.

As a practical matter, the arrangement of pool car shipment is in most cases a more satisfactory means of meeting the requirements of the ODT Order than the arrangement of stop-off or consolidation shipments. However, stop-off shipments may be more practical in a few isolated cases where there is only one buyer at a particular destination, if such buyer would be forced to truck his sugar from a neighboring point as an alternative to a stop-off shipment. Appropriate arrangements have been made with the Defense Supplies Corporation for reimbursement on stop-off shipments under established reimbursement programs. However, the reimbursement will not cover stop-off charge or additional freight charges on the quantity delivered at the stop-off point.

A number of sellers have already announced that they will require buyers to indicate on all orders for sugar that the amount ordered represents the total amount for which the buyer has certificates, unless such order is for an amount equal to a maximum carload. It is believed that this is a proper requirement in view of the goal which the ODT Order attempts to achieve. However, it should be pointed out that in those cases where a buyer's total available purchase certificates would enable him to purchase a tariff minimum carload, but still less than a maximum carload, the shipper should request the railroad to furnish a type of car having the lowest capacity that is in general use, but sufficient to haul the amount it is expected to be shipped.

In the case of sugar moved to intermediate points for storage-in-transit, it is, of course, required that cars be loaded to their maximum capacity for shipment to the storage point. In shipments from the storage point to points of delivery the requirement is that cars be loaded to tariff minimum when actual allocation prevents a larger shipment, or in other words, when the buyer has insufficient sugar purchase certificates to take a larger shipment.

Yours very truly,
J. Howard Westing
Chief, Sugar Branch
Food Rationing Division

Coffee Rationing

Starting November 29, the United States, the world's greatest coffee-drinking country, will ration its coffee so that no one may buy more than a pound of the beverage during the first five weeks of the rationing period.

The reason for our going on a ration basis can be put in a word: Ships.

The bottoms that ply between here and Brazil, Colombia and other South American countries now are freighting bauxite ores from the Guianas to make aluminum for our planes. Nitrates for our gun powder and explosives pack the hulls of boats putting out of Chile. Guatemalan and other Central American coffee boats now are jammed with guns, cannons and shells bound for the shores of England, Russia, Africa and wherever our troops and those of our Allies are fighting. In addition, much of what coffee is being transported is going to our armed forces.

As a result of the shipping situation, for every four pounds of coffee the country was importing a year ago, before Pearl Harbor, we now are getting only three pounds. In 1941, imports of green (unroasted) coffee from South and Central America amounted to 2.2 billion pounds. In 1942 that figure will be cut to 1.7 billion pounds. During the five year period, 1937 through 1941, U. S. coffee drinkers—about 80 per cent of the adult population—consumed 21 pounds annually; the current ration provides for 38% less consumption.

Even under rationing, however, Americans will drink much more coffee than the people of European countries. Germany has practically no real coffee; its population imbibes an orsatz concoction of acorns or grains of various sorts. The Italians are even worse off. As for the other countries under Axis domination, they receive whatever the coffee-starved Reich sees fit to spare.

The plain fact of the situation is that the American population is lucky to get what coffee is being brought up. There are crews risking their necks to sail it up here. There are marines in the Solomons who haven't had a cup of coffee in a long time and among them some who never will again. Besides, the shipping space now occupied by coffee might well be turned over to even more bauxite, copper, balsa wood, mica and other strategic materials. The problem now is to spread whatever coffee supply we do receive among the greatest number of people.

Which is where the rationing system enters. Here are its mechanics:

The coffee to be rationed includes roasted coffee—whether ground, in the bean, or decaffeinated—and commercially sold mixtures of coffee with chicory, cereal, or other substitutes. Consumers are not permitted to buy green (unroasted) coffee for home roasting. "Instant" coffee, soluble coffee, liquid coffee concentrates, coffee extracts and other beverage used instead of coffee are not rationed.

Restaurant coffee supplies have also been cut and will sell proportionately less coffee than they normally have.

During the week November 22 through November 28, retail coffee sales will be frozen for the purpose of enabling storekeepers to stock their shelves for

the beginning of ration sales. On November 29 the rationing begins.

War Ration Book Number One—the "Sugar Book"—will then be used for buying coffee. The stamps in the book numbered 28 and down to 20 are the coffee stamps. The first ration stamp is numbered 27, the second will number 28. This apparently disconnected sequence is used because of the physical arrangement of stamps in the ration book.

Only those whose ration books show their age to be 15 years or older may purchase a pound of coffee for each coffee stamp. The reason for this age limitation is to allow larger rations for the adult population.

The first ration period runs for five weeks from November 29 through January 3, 1943. Other ration periods will be announced later by the OPA.

Those who have no ration books or have lost them should apply immediately at their local War Price and Rationing Board. If lack of transportation facilities makes buying coffee in the specified quantities a hardship, the consumer may apply at his Rationing Board for a certificate to buy up to 5 pounds at a time. In that case, a sufficient number of stamps will be removed by the Board to cover the "advance" ration.

Shortage or no, coffee is price-controlled and no one should pay more than the ceiling price.

Government experts have drawn up a set of tips for getting the most out of our coffee rations. They are:

Consumers should buy their coffee as they need it: a pound at a time. In this way, the family will have fresher coffee and the grocer will be able to supply neighbors with the coffee they require for current needs. Stale coffee does not have the strength and flavor of fresh coffee.

Don't use "heaping" spoonsful but level ones. Eliminate "one for the pot."

Make only the exact amount to be served. If there is coffee left over, store it in the refrigerator for use as flavoring or for a cup of warmed-over coffee.

Coffee should be served as soon as it is made. The longer it cooks, once it has been made, the more flavor it loses.

Don't boil coffee. It drives off the flavor and aroma.

Keep the coffee in a tightly covered container and store it in the refrigerator or some other cool place where it will retain its flavor longer.

The coffee pot should be kept immaculately clean. It should be scrubbed with soap and water and entirely rinsed. The reason for this is that rancid oils from old coffee in the coffee pot may spoil the new brew.

The closer these rules are followed the more cups to the pound will be realized and the better the coffee will be. Coffee experts figure careful brewing and measuring should get 40 cups out of the pound.

Thus, the day of two cups of coffee at breakfast or between meal coffee-drinking is over for the immediate future. It ought to be taken in stride by a war-time public. The recent burst of panicky pre-ration buying and coffee hoarding—and a great deal of that coffee will grow stale long before it is drunk—was not especially heartening. Rationing, of course, will solve that particular situation. But there is always the chance that the chiselers, the bootleggers and the runners of the black markets will emerge to plague this campaign as they have other government drives. OPA authorities should be told about them immediately. If the public cooperates, these racketeers will be exposed. And the government, busy with waging war, is expecting that cooperation.

The Government Needs Typewriters

The Government needs typewriters for the War.

The War Production Board has asked the American Sugar Cane League to advise its members of the typewriter scarcity.

The War Production Board wants all the typewriters it can get that were manufactured after 1935 and the Louisiana sugar industry is asked to adjust its office work so that at least 25% of the 1935 to date models now being used can be sold to the Government for WAR WORK.

Anyone who can spare one typewriter, or more, should advise the War Production Board Office in New Orleans.

THIS IS AN EMERGENCY. DO YOUR PART.

HELP WANTED

PLANTATION OVERSEER

CAPABLE OF KEEPING TIME

Reply to P. 125

The Sugar Bulletin

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., DECEMBER 15, 1942 No. 6

To the Members of the American Sugarcane League

December 7, 1942

Dear Sugarcane Grower:

The United States Secretary of Agriculture has again issued an appeal for a maximum production of sugar in Louisiana. His announcement took the form of an acreage goal for 1943, which is 3% above the acreage harvested for the 1942 crop.

It is regrettable that this goal was not made known to the Louisiana Sugar Industry in September when the 1943 crop was being planted. Planting of sugarcane for 1943 harvest has, for the most part, been completed. It is still possible, though somewhat difficult, to improve the prospects of production if growers throughout the sugar belt make up their minds to do everything which will bring about maximum production.

The American Sugar Cane League has pleaded, insisted and demanded for almost ten years that the producers of Louisiana should not be restricted in their production of sugar, because the farmers should have the right to furnish the requirements of American consumers, at least to the limit of their ability to supply. In addition, the American Sugar Cane League has sincerely insisted that a progressive and prosperous domestic sugar industry is the best insurance policy for the protection of American consumers during any emergency, both as regards supplies of sugar and as to a fair price.

The events of the past two years have thoroughly demonstrated the correctness of our position. The production of sugar in 1942 will evidently be second only to the highest record ever made by Louisiana, which was in 1938. The fulfillment of the promise made that when given the opportunity, Louisiana growers and producers would demonstrate their ability and willingness to produce maximum quantities of sugar, has been a happy development from the standpoint of the relations of the Louisiana industry with their Government and with the American People. Nevertheless, it is of the most extreme importance that the production in 1942 shall be duplicated in 1943 and even surpassed.

It is our suggestion primarily that good stubble be not destroyed by any farmer, no matter how uncertain the prospects may be. We are informed by agricultural scientists that by using the proper methods the sugar production can be greatly improved. Therefore, we appeal to each grower of sugarcane to approach this situation with the purpose of making the greatest individual contribution to war production and with the purpose of vindicating the request of the American Sugar Cane League that the Louisiana industry be given its proper place in the political economy of the United States. The extent to which we deliver in times of emergency will, in a large measure, determine the place we will enjoy in the post-war economy.

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THE
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Marcel J. Voorhies, Editor
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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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Assuming that all will agree to save every stalk of good stubble, the growers of sugarcane can improve the prospects of sugar production for 1943 by the most efficient application of fertilizer. The League has already made definite arrangements with the Federal authorities in Washington so that ample supplies of fertilizer have been promised.

The scientists are convinced that by intense cultivation the productivity of each planted acre can be raised very substantially. That brings up the question of labor supplies and equipment. The League has already held numerous conferences with the Federal officials and we are very much encouraged to believe that the mistakes and shortages of 1942 will be largely corrected or eliminated during 1943.

With regard to farm machinery the League has made some progress, even at this early date, and our plans are to bring about a greater production of farm machinery used by sugarcane growers and to arrange for making such implements available to sugarcane growers.

Consequently, our appeal to each and every grower of sugarcane in Louisiana is based upon a well defined and developing program of the United States Government, as well as a well defined and developing program of the industry, acting through the American Sugar Cane League.

We have confidence that you will respond as a matter of patriotism, as a matter of loyalty to the Louisiana industry.

MARCEL J. VOORHIES
General Manager

C. J. BOURG
Vice Pres. and Washington Representative

Editor's note:

The Secretary of Agriculture on November 30th, 1942, announced the goals in terms of acres for agricultural crops. With respect to sugar the following appears in the report:

	1942 Goal Acres	1942 Reported Acres	1943 Goal Acres
Sugarcane	330,000	331,000	340,000
Sugar Beets	1,050,000	1,061,000	1,050,000

This represents an increase of 2.65 percent over 1942.

While Louisiana and Florida are not segregated, we know that Louisiana sugarcane farms in the sugar program had for sugar, seed and sirup 302,000 acres.

Office Of Price Administration

Leon Henderson
Administrator
Washington, D. C.

October 28, 1942

The Honorable
Allen J. Ellender
United States Senate

Dear Senator Ellender:

I should like to clarify several points raised in your remarks in the Congressional Record of September 28, Page 7760, regarding the price actions taken by this Office with respect to rice and sugar. Although for the most part the statements made are substantially correct, they do not tell the whole story.

The points raised in connection with sugar fall into three groups: (1) the relationship of raw sugar ceilings to parity prices of sugar beets and sugarcane, (2) the increase in the ceiling price of raw sugar, and (3) the level of retail prices in Washington, D. C.

With respect to the first of these points, it is necessary to distinguish between the imposition of a ceiling on the beet or the cane on the one hand, and on the raw sugar product on the other hand. In the first instance, ceilings would have to be set with reference to the separate parities on each of these agricultural commodities. But since raw sugar is a homogenous product and is the same regardless of the source from which it is derived, a ceiling price on raw sugar could not be set with reference to the two separate parities unless both parities had happened to lead to the same price for raw sugar. In setting a ceiling on the price of raw sugar, therefore, it became necessary to use either the beet parity or the cane parity. After a careful consideration of the various factors involved, it was decided that the maximum price for raw sugar should be set with reference to the parity price of sugar beets.

The more important considerations behind this decision are:

(1) At the time the ceiling price of 3.5 cents per

pound was established by Price Schedule No. 16, sugar beets were responsible for almost 80 per cent of the consumption of domestically produced sugar in the United States, as contrasted with only 20 per cent represented by continental sugarcane. Similarly there are 70,000 small family-sized farms in the United States engaged in sugar beet production and only 15,000 plantation-processor enterprises producing sugarcane. Moreover, the entire production of sugar beets is domestic, while about 92 per cent of all sugar from cane consumed in the United States is of foreign origin.

(2) At the time the regulation was issued the determination of a maximum price for raw sugar with reference to sugarcane parity would have required a maximum price of no less than 4.45 cents per pound (duty-paid c.i.f. basis, New York City) or .71 cents per pound above the current ceiling price. Such a determination would cost the American consumer around 85 million dollars and would give sugar beet producers and refiners an unwarranted premium over the parity price for sugar beets. Furthermore, the United States Government, which purchases blackstrap molasses (for industrial alcohol used in explosives) on the basis of sugar content, would have to pay an additional 15 million dollars.

The advance in the raw sugar ceiling price from 3.5 cents per pound to 3.74 cents was primarily the result of the purchase of the 1942 Cuban crop by the Defense Supplies Corporation. Although negotiations were instituted with the Cuban Sugar Stabilization Institute in the Fall of 1941, the final price was not determinable until the negotiations were concluded somewhat later. The price was finally established at 2.75 cents per pound f.o.b. North Side Ports of Cuba, plus .75 cents per pound duty and .34 cents per pound freight, a total of 3.74 cents at New York City. Price Schedule No. 16 was accordingly amended on January 5, 1942, to reflect this increase.

I doubt very much that there can be any question as to the necessity for the purchase of the Cuban crop. It is true that more than half of the Louisiana crop was harvested when the price ceiling was advanced. However, your statement that the Louisiana farmers did not benefit from the change in the ceiling price is only partially correct. Farmers are paid on the basis of the season average price as determined by the Department of Agriculture. The prices entering into this average covered approximately a six-month period, including about 3½ months during which the New Orleans raw basis price was 3.73 cents per pound, and about 2½ months during which the price was at the 3.5 cent level. Therefore, to the extent that the price of 3.73 cents is included in the average, it must be concluded that the farmer did benefit by the increase in the ceiling price.

In a sample number of retail stores in Washington a short time ago, OPA found the average selling price of sugar to be 7.35 cents per pound. This sample included only 39 stores and was overly weighted with independents, resulting in an average selling price above what would have been the case had a representative number of chain stores been included. In any case, an average retail price of 7.35 cents per pound allows less than 2 cents over the New Orleans price to cover a great number of costs such as packaging, transportation, storage, and other costs incurred by distributors, as well as the distributors' profit.

With respect to rice you have stated that:

* * * *

I do appreciate the interest you have taken in our problems and earnestly hope that the facts I have here presented will help to keep the record straight.

Sincerely yours,

/S/ Leon Henderson
Administrator

United States Senate

Committee on Agriculture and Forestry

December 3, 1942

Mr. Leon Henderson, Administrator
Office of Price Administration
Washington, D. C.

Dear Mr. Henderson:

You wrote me on October 28th, in connection with several points raised by me on the Senate floor with respect to action taken by OPA concerning sugar.

The parity index for October has been announced at 154 and the September index has been corrected to 153. Thus, the parity index which had been 152 for May, June, July and August has begun to rise again. The average for the past six months during which the sugar cane crop has been cultivated and is now being harvested has been 152½. These figures emphasize more than ever the unfairness of depriving the sugar cane growers of parity on a crop, the products of which will be marketed well into 1943.

It is my understanding that the parity for all farmers is being computed on the basis of the current index, namely 154. The last information I have from OPA is that parity for sugar has been computed by using the average index for 1941, which was 134. It is impossible to understand how such an index can be justified, and I appeal to you to interpret parity for sugar cane and sugar beet growers on the same parity index basis as is being used for growers of other products.

Your letter of October 28th discusses action taken by OPA at a time when the law provided for 110 per cent of parity, which was intended to average out around parity. Now that the law has been changed so that the right of all farmers to receive parity has been specifically recognized by law within the anti-inflation provisions, it seems to me that the obligation of the administrator of the act is greater to see that no action is taken depriving any group of farmers, no matter how small, of the enjoyment of the rights recognized by law.

I cannot agree with the statement in your letter "A ceiling price on raw sugar could not be set with reference to two separate parities." This reference is in connection with your discussion of parity for sugar beets being different from parity for sugar cane. While I insist that sugar cane growers are entitled to parity independently of sugar beets or any other commodity from which sugar is made, it still would have been possible to average the parities of cane and beet growers. A weighted average would have provided equitable treatment, at least.

In seeking to justify the decision you use for beet parity only, you have been misinformed by your advisors regarding the cane production in Louisiana. There are more than 17,000 producers of sugar cane and the great majority of them are small farmers. The

production of sugar cane is a different farm operation from the production of sugar beets, but we have more family size farms producing sugar cane in Louisiana than there are family size farms producing beet in any state in the Union. It is hardly accurate or fair to compare one state to twenty other states. The statement that "92 per cent of all sugar cane produced in the United States is from foreign origin" is not accurate because Hawaii and Puerto Rico are both domestic producers, and, according to statements made by the President and the Secretaries of Agriculture and Interior, the Administration considers Hawaiian and Puerto Rican products as domestic as sugar beets. The point which I had made is that the Price Control Act prohibits the administrator by law from any action which will deprive growers of parity. In your letter you seek to explain your admission that sugar cane growers are not receiving parity, by the statement that if you give the cane growers parity "it would cost the American consumer around $85,000,000." Congress is the lawmaking body, and if you disagree with the declared policy of Congress as expressed in the law, there is no legal right by which the administrator can change the law because of its effect. The procedure under our Government is to ask Congress to amend the law.

The statement in your letter about blackstrap molasses costing an additional $15,000,000 is inaccurate because OPA itself has determined a fair price for molasses, independently of the price of sugar. There is now no direct relationship.

When Government officials seek to emphasize the cost to the American consumer in connection with sugar, I am forced to ask what the additional cost to the American consumer has been with respect to subsidies and other price measures in connection with wheat and corn. I received from the Secretary of Agriculture, in a letter dated November 11th, the statement that the Commodity Credit Corporation is absorbing freight costs on corn averaging about 13c per bushel from Chicago to the various distillers. In the case of wheat, the Secretary reports that it is a "loss to the Commodity Credit Corporation, or an indirect subsidy, of about 35c on each bushel of wheat delivered to distillers." On the 1941 crop, the loss has been 60c per bushel.

You and I have agreed that the price which American farmers receive for their product should not be determined by the price which the United States Government is willing to pay for a similar foreign product. Yet in your letter you admit that purchase of the Cuban crop of 1942 set the price for domestic raw sugar. We have also agreed that the price paid for 100 per cent of the Cuban crop was not made available to the Louisiana producer on his crop. The facts are not as stated in your letter that the 3.73c price was available during 3½ months of the average season used to establish the sugar cane price. The season established by the Department of Agriculture began on October 17th, 1941 and ended on April 2, 1942, which means that the 3.48c price applied during 80 days and the 3.73c price applied during 86 days and the average price actually was 3.61c.

It is my information that the United States Government is now negotiating with the Cubans for the purchase of the 1943 crop, and I certainly would like to emphasize again, as I have to you personally, that we hope to avoid any similar occurrence. In fact, I ask your favorable consideration of a request that you make an announcement of policy to the effect that should the price of raw sugar be advanced in the midst of the average price season, this increase will be made available retroactively to the domestic raw sugar producer and the sugar cane growers.

After having discussed this matter with you and your staff any number of times, and having given it my earnest study for many months, I am constrained to state frankly that your action in depriving sugar cane growers of the parity to which they are entitled under the law, has been arbitrary in six particulars:

1. The parity index used has not been the current parity or even recent parity, but has extended back to a calendar year which is not used for any other commodity.

2. The base period price used in computing parity on sugar cane is not supported by the statistics published by the Department of Agriculture.

3. The selection of the sugar beets as the only basis for determining parity for sugar cane has no justification, as hereinbefore explained.

4. In any case where there is more than one parity to be considered in fixing a price ceiling on a manufactured product, the least that should be done is to average out the parities, if each parity cannot be served otherwise.

5. By refusing to consider sugar cane parity or to give it any weight, the whole conception of parity has been destroyed for a sugar cane grower.

6. The relationships between cane growers and processors during 1909-1914 base period and during 1942 are completely different from the relationships between beet growers and processors in the base period and in 1942; therefore, the use of sugar beet parity does not reflect parity or restore the purchasing power.

In your letter of October 28th, you state, in connection with my remarks on the Senate floor, "Although for the most part the statements made are substantially correct, they do not tell the whole story." It is very evident to me that your advisors have not placed before you the whole story. In fact, I am so thoroughly impressed with the need for the gathering of correct information on sugar and a restudy of the raw sugar ceiling schedule, that I recommend that the whole matter be made the subject of a complete review by OPA. If you agree, I shall be glad to sit down with you and discuss our experiences of the past two years with a view to developing a policy that will protect the American consumer and, at the same time, make available to domestic sugar cane growers and sugar beet growers the protection given them by Congress in the Price Control Act, as amended.

As I understand the situation in a general sense, parity for farmers is the recognized policy of the United States Government, and sugar cane growers are entitled to parity on the cane which they produce. To assure parity for the growers of sugar cane and sugar beets, the United States Government may resort to one of four procedures:

1. Raise the ceiling on the market price for raw sugar and maintain a fair price for molasses, so that a parity price to the farmer will result.

2. Establish the amount of the conditional payments to growers on a flexible basis so that parity will result.

3. Direct subsidy through loans, as in the case of basis commodities, or Government purchases.

4. Return to the tariff policy with the flexible provision whereby the rate would be advanced as

prices decline, and would be reduced as prices advance, in such manner as to protect the domestic market and also protect the consumer.

In my opinion, no legislation is needed because the Price Control Act as amended contains powers necessary under present conditions. I have outlined the above alternatives to impress upon you that Congress has already determined the policy and procedure by which parity can be enjoyed by farmers, including the cane growers in my State.

I have come to the conclusion that the Price Control Act offers the most satisfactory solution from the standpoint of the consumer, the industry and the Government, provided that the declared objectives of the law as to parity shall be maintained inviolate with respect to sugar cane and sugar beet growers.

I solicit the opportunity to discuss this entire subject with you.

With kindest regards and best wishes, I am

Sincerely yours,
Allen J. Ellender, U.S.S.

Freight Rates

The text of Supplementary Order No. 31, covered by press release number OPA 1171 follows:

Chapter XI—Office of Price Administration
Part 1305—Administration
Supplementary Order No. 31

TITLE 32—NATIONAL DEFENSE

Tax on Transportation of Property Imposed by Revenue Act of 1942

A statement of the reasons for this Supplementary Order No. 31 has been issued simultaneously herewith and has been filed with the Division of the Federal Register.

For the reasons set forth in that statement and under the authority vested in the Price Administrator by the Emergency Price Control Act of 1942, as amended, and Executive Order No. 9250, it is hereby ordered that:

1305.36 *Treatment of the tax on transportation of property imposed by the Revenue Act of 1942.*

(a) Notwithstanding the provisions of any price regulation, the tax on the transportation of all property (excepting coal) imposed by section 620 of the Revenue Act of 1942 shall, for purposes of determining the applicable maximum price of any commodity or service, be treated as though it were an increase of 3% in the amount charged by every person engaged in the business of transporting property for hire. It shall not be treated, under any provision of any price regulation or any interpretation thereof, as a tax for which a charge may be made in addition to the maximum price.

(1) "Revenue Act of 1942" means Public Law 753—77th Congress, approved October 21, 1942.

(2) "Price regulation" means a price schedule effective in accordance with the provisions of section 206 of the Emergency Price Control Act of 1942, a maximum price regulation or temporary maximum price regulation heretofore or hereafter issued, or any amendment or supplement thereto or order thereunder heretofore or hereafter issued.

(d) This Supplementary Order No. 31 (section 1305.36) shall become effective December 1, 1942.

(Pub. Laws 421 and 729, 77th Cong., E. O. 9250, 7 F.R. 7871)

Issued this 26th day of November, 1942.

Nov. *30, 1942*

To the Producers of Direct Consumption Sugar.

Dear Sirs:

The following wire, received from our Washington office, is transmitted to you for your information.

Very truly yours,
Marcel J. Voorhies,
General Manager.

OPA HAS ISSUED FOLLOWING INTERPRETATION ON TRANSPORTATION TAX WHICH BECOMES EFFECTIVE TOMORROW QUOTE REGARDING THREE PER CENT PROPERTY TRANSPORTATION TAX PRIMARY DISTRIBUTOR OF DIRECT CONSUMPTION SUGAR MUST CONSIDER TAX AS INCREASE IN TRANSPORTATION CHARGES AND TREAT IN MANNER PROVIDED FOR TRANSPORTATION CHARGES IN REVISED PRICE SCHEDULE SIXTY.

C. J. BOURG

DEFENSE SUPPLIES CORPORATION
Washington, D. C.

December 1, 1942

Mr. Clarence Bourg
Union Trust Building
Washington, D. C.

Dear Mr. Bourg:

Under the Revenue Act of 1942, a tax of 3 per cent will be applicable, as of December 1, 1942, to freight paid in the transportation of property in the United States.

You are hereby advised that taxes on freight paid in the transportation of raw and direct-consumption sugar in the United States under the aforesaid Revenue Act of 1942 are not subject to reimbursement by Defense Supplies Corporation.

Yours very truly,
(Signed)
SAMUEL H. SABIN
Vice President.

(*Editor's Note*) The Collector of Internal Revenue at New Orleans has prepared instructions regarding the 3 per cent Transportation Tax. The printed tax forms are not yet available. Inquiries regarding this tax should be made at the miscellaneous Tax Division, Custom House, New Orleans.

Federal Works Agency

Works Projects Administration of Louisiana

November 9, 1942

Mr. Wallace C. Kemper, President
American Sugar Cane League
Franklin, Louisiana

cc: Mr. W. Prescott Foster, Director
Department of Highways
Baton Rouge, Louisiana

Dear Mr. Kemper:

A copy of a letter, dated November 4, 1942, from Mr. W. Prescott Foster to you, has come to my attention, and as the question of W.P.A. operations is raised, I am taking the liberty of addressing you direct in order to explain our policy and determine if

further information on this subject is desired.

It has always been a policy of the Work Projects Administration to avoid the creation of a labor shortage. This agency provides work for persons who are in need and unemployed, and where opportunities for employment exist which the workers are capable of performing, there is no reason for operating W.P.A. projects.

We have adjusted employment on W.P.A. projects throughout the state this year, as we have previously, in order to avoid employment of workers when they are needed in agriculture. Anticipating the need in the cane fields for all workers qualified for that work, we had planned during the summer the discontinuance of projects of the Operations Division, and shortly after October 1 these activities were discontinued, as it was obvious that employment was available to the workers employed on these projects. This policy is followed in each locality throughout the state. There still remain in some locations a few handicapped workers on Operations Division projects, and of course, employment on Service Division projects, as this division operates projects which provide employment principally for white collar workers. This year, as previously, thousands of workers left the Work Projects Administration for agricultural work, and this includes workers needed for cane cutting.

In order that you may have a complete picture of the number of persons employed in the cane parishes in the Operations Division, which employs workers who would be eligible for cane cutting, I would like to advise that the employment report of November 3, 1942, indicates that no workers are employed on Operations Division projects in the parishes of Avoyelles, Pointe Coupee, Evangeline, West Baton Rouge, Lafayette, Ascension, Assumption, St. James, St. Mary, St. John, St. Charles, Lafourche, and Terrebonne. Twenty-four workers are employed in St. Landry, thirteen in Vermillion, fourteen in St. Martin, fifteen in Iberia and eight in Iberville. An example of the type of workers employed may be indicated in the instance of workers on the school building in Plaquemine, Iberville Parish, where one of eight workers is a painter with one arm, and a clerk employed on the project is crippled and uses crutches.

In the other parishes, in which some employment is listed above, are workers who are handicapped and who, after being considered by employers, were not considered as qualified for referral. However, supervisors of these projects have instructions that if anyone offers employment to these workers, they are to be referred to such employment and released from W.P.A. employment.

No employment is shown for East Baton Rouge, where employment in the last week has been reduced by 50%, the balance of the workers being in the City of Baton Rouge. In Rapides Parish, the workers employed come from several of the surrounding parishes, principally from parishes in the northern and western portions of the state.

We have a close working relationship with the United States Employment Service and they requisition from us workers needed for any type of work. In addition to this, we have a Division of Training and Reemployment within the Work Projects Administration, whose sole function is to obtain employment for W.P.A. workers and remove them from projects as opportunities in private employment present themselves. It would appear that this has been accomplished in the cane belt. If, however, you or any of the members of the League have specific information as to the location of units of any project in the state where workers are employed and where they are needed in private employment, we will be glad to immediately refer those workers who are qualified for the work.

I would like to request that if you have any specific locality in which employment on W.P.A. projects is interfering with agricultural work, this office be advised..

Yours very truly,
J. H. Crutcher

Treasury Department

War Savings Staff

512 Pan American Building
New Orleans, Louisiana
November 13, 1942

Mr. Marcel Voorhies, General Manager
Sugar Cane League
Whitney Building
New Orleans, Louisiana

Dear Mr. Voorhies:

I appreciate the opportunity to send a message to the sugar cane growers through your BULLETIN.

The sugar cane growers of Louisiana are being asked to join all other farmers in the Harvest War Bond Sale.

The War is costly—It might be called a "3 M War" calling for Men—Money—Materials. It takes all three of these in great and ever increasing amounts and numbers.

The Farmer is in the front line on production. That is his particular job and he has proven his ability to do that job by increasing his production 12%—The greatest production in the history of this nation.

With few exceptions the agricultural production has exceeded the quotas which have been assigned by the Secretary of Agriculture. These crops are bringing better financial returns and farmers generally are in better shape than usual. With this increased income he will naturally pay his debts and reduce his mortgages, and after that—what!

Well the farmer is being asked to purchase War Bonds. He is not asked for a donation. He is offered the best and safest investment. War Bonds purchased now is the cushion farmers will need for the shock that comes after the war.

A special Harvest Campaign will be carried on in every parish and the United States Treasury is asking every farmer to invest ten percent in War Bonds.

Pay your debts
Reduce your mortgages
Buy War Bonds

That is the program suggested by the Treasury to the farmers of the nation. It is sound—It is patriotic.

Yours truly,
J. W. Bateman
Deputy Administrator

Office Of Price Administration

Every person in the United States who slaughters and delivers to others even so much as one animal of the sort listed in the OPA meat restriction order of October 1 is subject to the restrictions of the order and to its penalties in case of violation, the Office of Price Administration stated recently. Farmers who slaughter animals only for their own use are exempt,

and are not subject to any fine. Animals covered are cattle, calves, sheep, lambs, and hogs. Delivery of meat from these animals to civilians is limited so that there shall be enough for the fighting forces of the United States and its allies.

Records of all slaughter for delivery to others must be kept and be available to inspectors of the OPA, by everyone from the country butcher, or the farmer who slaughters meat for others, to the largest packing houses. False statements of the number of animals slaughtered and delivered, or other violations of the restriction order, subject offenders to fines up to $10,000 or ten years in jail, or both.

The Office of Price Administration stated these facts emphatically to call attention to the wide scope of the order. All slaughterers, including small country slaughterers and butchers, and custom slaughterers who kill animals belonging to others, are subject to the terms of the order, as are farmers who kill animals except for the use of themselves and their families. Anyone, to repeat, who kills and delivers to others, animals from which are obtained beef, veal, lamb and mutton, and pork, is accountable. They must keep records of all they slaughter and deliver, and they must keep within the limits set by the order for deliveries to civilians.

These limits are in two classes. The larger slaughterers—those who kill more than 500,000 pounds in a quarter—are limited in their civilian deliveries to the following percentages of the kinds of meat covered that they delivered to civilians in the corresponding quarter of 1941: beef, 70; pork, 75; lamb and mutton, 95; veal, 100.

The other slaughterers, including everyone else are limited to no more than the same amount of each of the kinds of meat that they slaughtered and delivered to others in the corresponding quarter of 1941. Cutter and canner grades of beef are defined as a special kind, and here, too, "non-quota" slaughterers may not deliver more of this kind than they did in the same quarter of 1941.

In issuing its statement the Office of Price Administration emphasized the main purpose of the meat restriction order which is to insure that enough meat is available for the fighting forces. Until meat rationing is started, the equitable distribution of the share that is allotted to civilians is in the hands of the meat industry itself, which is making every effort to live up to this responsibility.

Violations of the order by even the smallest "non-quota" slaughterers will have a serious effect first of all on the supplies for the armed forces, and are an interference with the war program that will not be tolerated, the OPA said.

We take pleasure in announcing the appointment of

MR. G. F. McCORMACK

TO OUR

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as a Manufacturers Representative

Mr. McCormack was formerly associated with

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THE SUGAR BULLETIN

Entered as second-class matter April 13, 1925, at the post office at New Orleans, La., under Act of March 6, 1879.

We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., JANUARY 1, 1943 No. 7

Brief of the American Sugar Cane Leauge of the U.S.A. To Industry Committee No. 50

Re: Minimum Wage Rates for the Sugar and Related Products Industry

This brief is filed by the American Sugar Cane League of the U. S. A., an organization composed of approximately 10,000 Louisiana sugar cane farmers and all of the fifty-eight processors of sugar cane into sugar, operating the sixty-seven processing factories in the State of Louisiana. This brief is filed on behalf of all of its processor members, each of whose operations come within the definition of the "Sugar and Related Products Industry". These processors constitute all of the processors of sugar cane into sugar operating in the continental United States, except two operating in the State of Florida.

The notice of public hearing before Industry Committee No. 50 provides that written briefs of persons who cannot appear personally will be given consideration by the committee. Because of transportation difficulties, particularly during the holiday season of the year, when the hearing will be held, and because the date of the hearing immediately follows the close of the harvesting and processing season in Louisiana, while the processors are busily engaged in handling their products, it appears probable at this time that no Louisiana processor will be able to personally appear at the hearing before the Industry Committee. For this reason the American Sugar Cane League, in its aforesaid representative capacity, takes this opportunity of expressing the views of its processor members concerning the highest minimum wage rates for the Sugar and Related Products Industry, which, having due regard to economic and competitive conditions, will not substantially curtail employment.

Definition of Industry

The term "Sugar and Related Products Industry" is defined in Administrative Order 162 issued October 8, 1942, and in the notice of hearing, and will not be repeated here.

It is our opinion that the definition of the industry is much broader than its title implies, and attempts to bring within one industry several industries completely unrelated in economic or competitive conditions. For instance, the production of maple sugar and syrup from maple sap is completely unrelated to the processing of sugar cane into sugar, both in nature and scope of operations, and in economic and competitive conditions. Likewise, the processing of sugar cane into sugar is unrelated in these particulars to the refining of raw sugar. There are other completely unrelated industries included in the definition. It is hoped that these dissimilarities and this lack of relationship will be properly recognized and adjusted through the establishment of several branches or classifications within the industry, which matter will be hereinafter discussed. With this hope, no further comment will be made on this portion of the definition.

We do seriously object to and make protest against that portion of the definition which states: "The production of any products covered under this definition shall be deemed to begin with the loading of the raw materials at the farm."

Without some qualification, this provision of the definition may be construed as an attempt to restrict

THE SUGAR BULLETIN

414 Whitney Bldg., New Orleans

Marcel J. Voorhies, Editor
Issued on the 1st and 15th of each month. Official Organ of the American Sugar Cane League of the U. S. A., in which are consolidated
The Louisiana Sugar Planters' Assn.
The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
Subscription Price, 50 Cents per Year.

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the applicability of certain provisions of exemption contained in the Fair Labor Standards Act of 1938. We refer particularly to the exemption under Section 13 (a) (6) of the act, which exempts from the wage and hour provisions, "any employee employed in agriculture", and the exemption under Section 13 (a) (10) of the act, which also exempts from the wage and hour provisions, "any individual employed within the area of production (as defined by the Administrator) engaged in handling, packing, storing, ginning, compressing, pasteurizing, drying, preparing in their raw or natural state, or canning of agricultural or horticultural commodities for market, or in making cheese or butter or other dairy products".

Agriculture is defined in Section 3 (f) of the act as follows:

"'Agriculture' includes farming in all its branches and among other things includes the cultivation and tillage of the soil, dairying, the production, cultivation, growing, and harvesting of any agricultural or horticultural commodities (including commodities defined as agricultural commodities in secton 15(g) of the Agricultural Marketing Act, as amended), the raising of livestock, bees, fur-bearing animals, or poultry, and any practices (including any forestry or lumbering operations) performed by a farmer or on a farm as an incident to or in conjunction with such farming operations, including preparation for market, delivery to storage or to market or to carriers for transportation to market."

The Wage and Hour Division of the Department of Labor, in interpreting the applicability of the act to employees engaged in the transportation of sugar cane from the farm to the factory, has stated that the 13 (a) (6) exemption includes the employees of a farmer who transport cane grown by their employer from the farm to the mill, and also includes employees of a processor who is also a farmer, while such employees are engaged in transporting cane grown by this employer from the farm to the mill. This interpretation is contained in a letter written by Rufus G. Poole, Assistant Solicitor, Department of Labor, in Charge of Opinions and Review, to Paul G. Borron, Jr., Attorney for the American Sugar Cane League, under date of November 17, 1941, copies of which we shall gladly furnish if desired.

The loading of sugar cane at the farm under similar circumstances, would likewise be exempt under Section 13 (a) (6), and there are other operations incident to the handling, loading or transportation of the sugar cane which would be considered exempt under Section 13 (a) (10). The conflict are therefore apparent.

Certainly no Industry Committee can destroy or modify any exemption granted by the Congress in enacting this law. However, this definition could easily give rise to many questions and much controversy. We therefore recommend that the second paragraph of the definition be amended to read as follows:

"The production of any products covered under this definition shall be deemed to begin with the loading of the raw materials at the farm; provided, that nothing herein contained shall be construed to restrict or broaden the provisions of Section 13 (a) (6), Section (a) (10), or any other exemption contained in the Fair Labor Standards Act of 1938."

Establishment of Classifications or Branches

Under the provisions of Section 8 (c) of the Fair Labor Standards Act, the Industry Committee for any industry is directed to "recommend such reasonable classifications within any industry as it determines to be necessary for the purpose of fixing for each classification within such industry the highest minimum wage rate (not in excess of 40c per hour) which (1) will not substantially curtail employment in such classification and (2) will not give a competitive advantage to any group in the industry, and shall recommend for each classification in the industry the highest minimum wage rate which the committee determines will not substantially curtail employment in such classification".

We have mentioned above the fact that the term "Sugar and Related Products Industry" as defined by the Administrator, is, in our opinion, too broad, in that it includes several industries, dissimilar not only in nature and scope of operations but in economic and competitive conditions. If these dissimilarities are not sufficient to preclude the amalgamation of these several industries into one, certainly they amply justify the establishment of separate classifications or branches.

We are not sufficiently acquainted with some of the operations included in the definition to make any recommendation as to them. We are well acquainted, through many years of experience, with the processing of sugar cane into sugar and molasses, the refining of raw sugar, and the processing of sugar cane into syrup. We have some knowledge of the processing of sorgo into syrup. It is our definite opinion,

based upon our experience and knowledge, that separate classifications or branches should be established for these four operations, with separate study and treatment given to each.

We therefore recommend that there be established the four following branches of the Sugar and Related Products Industry, and such other branches as the facts may justify and require:

1. Processing of Sugar Cane into Sugar and Molasses Branch.
2. Refining of Raw Sugar Branch.
3. Cane Syrup Branch.
4. Sorgo Syrup Branch.

Processing of Sugar Cane into Sugar and Molasses Branch:

We suggest that the Processing of Sugar Cane Into Sugar and Molasses Branch of the industry be defined to mean all extracting and processing operations performed on sugar cane, including all operations performed by the processor necessary or incidental thereto, in the production of sugar and molasses, other than the refining of raw sugar.

It is the operations coming within this branch of the Sugar and Related Products Industry in which the American Sugar Cane League and its members are primarily interested. It is our opinion that these operations constitute an industry unto itself and require special consideration and treatment.

Sugar is produced from sugar cane in only two of the forty-eight states, Louisiana and Florida. The industry has been in existence in the State of Louisiana for a period of more than 100 years, while in the State of Florida its origin is of comparatively recent date. Although for many years the value of this industry, or branch of the industry, has been minimized when consideration was given to national economy, we believe that in this present national and international crisis, its real value should be well established.

The processing of sugar cane into sugar and molasses is more related to agriculture than to industry. For many years sugar cane was grown principally on large plantations, and most of the plantation owners operated small processing factories on these plantations. This was the farmer's method of preparing his agricultural product for market. With the development of modern machinery and the complexities of our present economy, such operations became economically unsound. Many of the factories discontinued their operations and sugar cane became an article in local commerce, being sold by the farmers who operated no factory to those who did. Many small farmers entered the picture, and there are now some 17,000 sugar cane farmers in the State of Louisiana.

Despite these changes, the processing of sugar cane in Louisiana is, and we believe shall continue to be, more agricultural than industrial. Some of the processing establishments, even today, process only the cane grown by their owners. Many of them are still relatively small, and because of financial adversities, caused principally by the low market price of sugar, which at this time has not materially increased, have not been able to purchase and install modern machinery and labor-saving devices.

The Louisiana sugar cane farmers and processors have also experienced cultural difficulties in comparatively recent years, which threatened their existence. Because of the ravages of a plant disease, mosaic, the production of sugar cane in Louisiana dropped from 324,429 tons in 1921 to less than 50,000 tons in 1926. Through the development of new varieties of cane, this threat has been eliminated, but the industry, or many members of the industry, still feel its effect.

In considering the nature and scope of the processing operations, we find a close relationship to agriculture. The processing of the cane is merely the completion of this agricultural crop. The harvesting season in Louisiana normally begins during the early part of October and is completed during the latter part of December. The processing of the cane commences immediately with the beginning of harvesting and ends immediately thereafter. Sugar cane is highly perishable and to avoid deterioration or complete loss, must be processed within a few days after harvesting. The processing is, and must be, a continuous uninterrupted operation, 24 hours each day for seven days each week, during the harvesting season.

Because of the nature of the operations, the labor problem is one of much concern. A large percentage of the factory laborers are not only unskilled, but completely inexperienced in any type of industrial work. Many of the laborers work on the sugar cane farms nine or ten months of the year, and during the processing season, normally lasting from sixty to eighty days, are employed in the factory. It is impossible to maintain a regular working crew and there is a constant change in personnel. This being a strictly agricultural area, there is no supply of experienced laborers to draw replacements from, as there is in industrial areas. At all times many of the employees of these factories are completely green, their only previous employment being as farm laborers. The operations lasting only from sixty to eighty days each year, and with the constant change in pesronnel, it is impossible to obtain a maximum of efficiency in labor performance.

Considering the branches of the industry from the viewpoint of products manufactured and competitive conditions, the product of most of the processing establishments is raw sugar and the residuary product, blackstrap molasses. A few of the processors produce a form of direct consumption sugar, such as plantation granulated, crystals and turbinados. These latter sugars are produced through a variation of the raw sugar process, but all in a seasonal continuous operation, direct from sugar cane. These sugars sell at a price between the raw sugar price and refined sugar price, and at the present time are sold under special ceiling prices established by the OPA. These sugars could hardly be considered competitive with refined sugar. The raw sugar is, of course, not only not competitive but affords the refiner his raw material. Likewise, these sugars produced from sugar cane could not be considered competitive with sugar produced from sugar beets. Beet sugar is comparative to refined cane sugar and highly competitive with that product.

We therefore submit that the above facts disclose that the processing of sugar cane into sugar and molasses is completely dissimilar in practically every respect from any of the other operations included in the definition of the Sugar and Related Products Industry. We do not believe it is fair or practical to treat on a comparative basis the processing of this perishable seasonal agricultural commodity, with its many peculiarities, and the refining of raw sugar, which is a continuous year-round operation, solely industrial, and having no relationship whatever to the agricultural movement.

The Congress of the United States, in enacting the Fair Labor Standards Act, has recognized the distinguishing characteristics between the processing of

sugar cane into sugar and molasses, and the refining of raw sugar, in granting the hour exemption to the processing operations, under Section 7 (c) of the act. Certainly the facts and circumstances justifying special legislative treatment should be ample justification for special industry committee treatment.

There is ample precedent to segregate these operations into separate branches, although they may in some measure be considered related, in the action of the Industry Committee Branch of the Wage and Hour Division in establishing not separate branches, but separate industry committees for the Tobacco Industry and the Cigar Industry. There is additional precedent for establishing these branches, in the action of the Cigar Industry Committee, which established a Cigar Manufacturing Branch with a minimum wage of 40c per hour, and Leaf Processing Branch, with a minimum wage of 35c per hour.

Minimum Wage in Processing of Sugar Cane into Sugar and Molasses Branch:

Assuming that the committee will establish a separate branch for the processing of sugar cane into sugar and molasses, which assumption we believe is fairly justified, the next and most important question is the maximum wage rate that should be established for this branch.

It is the view of this organization, and we believe of all of its processor members, that under present conditions, with the well known increase in cost of living, that an increase in the minimum wage rate is justified. Some of the processors who felt that they could on a sound economical basis, make an increase, have voluntarily increased their wage rates above the 30c minimum during the 1942 processing operations. The question is, to what extent should a mandatory increase be made, in order to properly accomplish the purposes contained in the Fair Labor Standards Act, and at the same time bearing in mind the statutory safeguards, which are necessary to avoid a disruption of conditions within any branch of the industry, which would undoubtedly curtail employment.

We believe that the purpose of all interested persons would best be served, and at the same time there would be properly and equitably accomplished the objectives of the Fair Labor Standards Act, by establishing a minimum wage of 35c per hour for this branch of the industry. We therefore make this our recommendation, and in justification therefor, recite the following facts:

Largely because of the peculiar conditions, mentioned under the preceding division of this brief, applicable to the processors, and because of the cultural and financial difficulties experienced by them in recent years, the minimum wage rate paid in the Louisiana processing establishments prior to the enactment of the Fair Labor Standards Act was less than 25c per hour. The rates were increased to the statutory minimum of 25c in October, 1938, and it was necessary for the processors to adjust their operations to meet this increase. In October, 1939, the minimum was increased from 25c to 30c per hour as required under the act, and adjustments have been made to care for this increase. Until the commencement of the 1942 processing operations in October, 1942, practically no adjustments had been made or were possible in wages since October, 1939. A survey made by the American Sugar Cane League of 58 Louisiana factories, after the completion of the 1941 processing operations, showed that these factories employed, during the 1941 operations, more than 9,000 production employees. Fifty-seven of these fifty-eight factories paid a minimum wage of 30c per hour to approximately 5,500 production employees. One factory paid a minimum of 31c per hour to approximately 215 production employees.

No survey has been possible for the 1942 seasonal operations now in progress. We do know, however, that some of the factories have voluntarily increased the minimum wage in amounts ranging from two to five cents per hour. We likewise know that some of the factories, particularly the smaller ones, have maintained the 30c per hour minimum.

The most important factor in considering a fair wage to the employee is the cost and return of the employer. During recent years, up until 1941, the price of sugar was at an almost unprecedented low level. Some processors, for this reason, were forced to discontinue operations. During 1937, 1938, 1939 and 1940 some of the processors operated at a loss. The margin of the more efficient processors was small. In 1941 and 1942 operating costs have increased. In most industries the market price of the product manufactured has increased in an amount sufficient to defray the increase in cost including substantial wage increases. This is not true as to the processing of sugar cane into sugar. The season's average price of Louisiana raw sugar for the 1937 crop, the last completed crop prior to the enactment of the Fair Labor Standards Act, was $3.19 per hundred pounds. The average price for the 1941 crop, delivered at New Orleans, Louisiana, was $3.61 per hundred pounds, an increase of only 13% over 1937. Based upon the present ceiling on raw sugar, established by the OPA, the average price for the 1942 crop will be only $3.73 per hundred pounds, delivered at New Orleans, Louisiana, an increase of only approximately 17% over 1937. Under the Sugar cane purchase contracts, between the sugar cane farmers and processors, the price feature of which is established by the Secretary of Agriculture in pursuance with the provisions of the Sugar Act of 1937, and which is based upon the market price of raw sugar, the major portion of this increase in price has been paid to the sugar cane grower or farmer. We must add here that under the present ceiling on raw sugar, the farmer is getting less than parity for his commodity, despite the price control statute making parity mandatory for agricultural commodities.

Without an increase in return, it is our opinion that many of the Louisiana processors, particularly those operating the smaller and less efficient factories, cannot at this time pay a minimum wage of 40c per hour. Assuming no reduction in the present price, with the justified expectancy of a better price, and given a period of adjustment with a more gradual increase to the 40c per hour minimum, it is believed that all of the processors by the year 1945 will be able to pay this minimum and operate without loss.

Although it is realized that the Industry Committee has no control over the price of any commodity, in view of the fact that price and return so vitally affect wage rates, we cannot too strongly here point out and emphasize that the present ceiling price on sugar, on a comparative basis with other commodities, or on a legal or equitable basis, is completely unjustified. If the ceiling were increased to a reasonable figure, putting all of the sugar processors on an economically sound footing, we believe that every processor would voluntarily increase his minimum wage to the 40c level.

In considering this question we must bear in mind that the processor cannot pass on to the refiner or consumer any increase in cost, nor can he pass it back

to the farmer who supplies his raw material. Under the Sugar Act of 1937 the minimum price which he must pay for cane is established by the Secretary of Agriculture, and the OPA has established the maximum price at which he may market his product. Further, the processor cannot immediately offset any increase in labor cost through the installation of more efficient equipment or labor-saving devices, because of the scarcity of materials required to produce this equipment and these devices. Being in the middle, with no flexibility on either end, any drastic increase in any item of cost could easily lead to serious consequences, with the possibility of some of the processors being unable to continue operations, which would undoubtedly curtail employment and be contrary to the safeguards provided in the Fair Labor Standards Act.

In considering the increase in minimum wage in this branch of the industry, we must bear in mind that an increase of from 30 to 40c per hour, 33-1/3%, would be drastic. An increase of 33-1/3%, under the facts hereinabove recited, is much greater than can be justified, and in our opinion is in violation of the present policy of the National War Labor Board and the provisions of the President's Executive Order 9250 stabilizing wages and salaries, and is contrary to the announced policy of the Wage and Hour Division of the Department of Labor.

We need not comment on the effect of the Executive Order 9250, which freezes all wages and salaries at present levels and requires prior approval of the National War Labor Board or the Commissioner of Internal Revenue to make any wage adjustment. We realize that the Executive Order does not nullify the provisions of the Fair Labor Standards Act, but submit that an increase of 33-1/3%, not otherwise justified, would be doing violence to this order.

The National War Labor Board on July 16, 1942, announced in the Little Steel Case, a wage stabilization policy, which is based on maintaining the purchasing power of hourly wage rates as of January, 1941. This has become known as the Little Steel Formula. In applying this formula, the Board has approved increases in wages up to a 15% increase over the wage paid in January, 1941, which 15% represents the increase in the cost of living between January 1, 1941 and May, 1942. The minimum wage paid to employees in the Louisiana processing establishments during the 1940 processing season, which ended just prior to January, 1941, and during the 1941 processing season, completed in December, 1941, was 30c per hour. A 15% increase would mean a minimum wage of 34½c per hour. Therefore, the minimum wage of 35c per hour here recommended, which is an increase of 16-2/3% should be considered fair, equitable and entirely in keeping with the adjustments permitted by the National War Labor Board. Certainly the Little Steel Formula would not permit an increase of 33-1/3%.

The Wage and Hour Division, in submitting its first annual report in 1939, in stating the objectives of the Fair Labor Standards Act and the flexibility of the industry committee method of reaching the 40c minimum wage, said:

> "In this way, allowance can be made for differences that exist in the capacity of industries to adjust their wage structures to the 40-cent rate. Undoubtedly a 40-cent minimum is economically feasible in many industries at the present time; in some industries, however, the immediate adoption of this standard might result in serious dislocations of production and employment. In industries of the latter type, a gradual approach to the 40-cent objective is indicated."

It is our opinion that the sugar cane processing branch is an industry of the type mentioned in the above quoted paragraph, and for this reason a gradual approach to the 40c objective is proper.

Refining of Raw Sugar Branch:

We believe that the facts hereinabove presented definitely indicate that a separate branch should be established for the refining of raw sugar. As for a definition of this branch, it could be defined to mean the melting, bleaching and purification operations performed on raw sugar in the production of refined sugar.

We make no recommendation as to the minimum wage to be established for this branch of the industry.

Cane Syrup Branch

We suggest that this branch be defined to mean the extracting and processing operations performed on sugar cane in the production of syrup.

The processing of sugar cane into syrup is in some respects similar to the processing of sugar cane into sugar and molasses. It is similar in that it is the processing of the same perishable agricultural commodity during continuous seasonal operations.

There is, of course, no competition between the syrup producers and sugar and molasses producers. Further, a majority of the establishments in which sugar cane is processed into syrup are very small, employing only a few persons. We do not believe that any increase in the wage rate for this branch of the industry is justified.

Based upon our knowledge of the operations of the cane syrup producers of the State of Louisiana, and elsewhere, we doubt whether a majority of them are covered by the provisions of the Fair Labor Standards Act. The syrup produced by many of them is not consumed out of the state where produced, and not being produced for interstate commerce, the processing operations would not be covered by the act. There are other producers who are probably exempt from the wage and hour provisions of the act under the provisions of Section 13 (a) (10). This being true, we do not believe that it is equitable to force an increase on the small percentage of covered employers, while their competitors can pay any wage they may think proper.

Sorgo Syrup Branch:

We suggest that this branch be defined to mean the extracting and processing operations performed on sorgo in the production of syrup.

Our knowledge concerning the processing of sorgo is rather limited, but it is our understanding that it is substantially similar to the operations performed in the processing of sugar cane into syrup. Therefore, what has been stated above as to the cane syrup branch should be applicable to the sorgo syrup branch. If this is correct, it is possible that these two operations may be equitably combined into one branch.

Our only knowledge as to the processing of sorgo into syrup arises out of a request made by the Department of Agriculture of this organization during the early part of 1942, that the Louisiana sugar cane farmers produce sorgo and that certain of the cane processors process the sorgo into syrup to be used in producing alcohol for munitions. A number of cane farmers complied with the request and three of the processors processed the sorgo into syrup. The syrup was sold to the Defense Supplies Corporation. The

minimum wage paid to the employees engaged in these operations was 30c per hour. One of the three processors conducted his operations at a loss; one of them "broke even" and the third made a few dollars profit.

Conclusion

We therefore request that this brief be filed in the record of the hearing to be held before the Sugar and Related Products Industry Committee, that the facts herein contained be given thorough consideration, and that there be incorporated in the recommendations of Industry Committee No. 50 the suggestions here made.

Respectfully submitted,
AMERICAN SUGAR CANE LEAGUE
OF THE U. S. A.
By: (Signed) W. C. KEMPER
President

Textile Bags

Strict controls over the use of textile bags—particularly those made from burlap and jute fabrics—were imposed recently by the War Production Board with issuance of conservation Order M-221. The order will be in effect for two months, pending further study of the textile bag situation.

The order:

1. Prohibits the use of any type of textile bags—new or used—as sandbags for civilian defense against air raids or "any other act of the enemy." Past experience has shown that large numbers of second-hand bags are withdrawn from available stocks in the face of threatened emergency—as was the case on the west coast immediately after Pearl Harbor.

2. Assures Cuban, Puerto Rican and domestic sugar growers of a continued supply of raw sugar bags for packing their product by requiring that such bags, once emptied, be used for no other purpose than packing raw sugar. These bags are manufactured in India, and continued supplies are dependent upon uninterrupted shipping schedules. The restriction will result in conservation of approximately 10,000,000 sugar bags.

3. Establishes restrictions on the use of bags for packing wool. These are burlap bags between 6 and 7½ feet long, and are needed by wool growers for the 943 wool clip. By today's action, all such bags must be held for next year's wool clip, obviating the possibility that allocations of new burlap would have to be made to replace the wool bags which otherwise would be used for non-essential purposes.

4. Curtails sale of new burlap bags to any person to a maximum of 50 per cent of the number of burlap bags sold to that same person in 1941. Excepted from this provision are appeal granted under Order M-47, (burlap and burlap products).

5. Restricts use of new burlap bags to packing the following: barley, beans and peas, chemical (other than fertilizer), dairy products, mohair, potatoes, rice, rock salt, feeds and meals for animal consumption, fruits (dried), nuts, seeds sponges, starch, sugar (raw), wheat and wool and wool products.

Today's order was issued concurrently with amendments to Order M-107, which set up controls over cotton textiles for bags, and M-47, covering burlap and burlap products. In addition to other changes, the amendement provides that all restrictions on use and distribution of textile bags in M-107 and M-47 be incorporated in the new order, M-221, but other provisions of M-107 and M-47 will continue to be in effect and administered by the Textile, Clothing and Leather Branch as in the past.

M-221, however, will be administered by the containers Branch.

Other provisions of M-221, of interest primarily to the trade, include:

1. Insurance against damage to both new and used textile bags is provided by the requirement that all bags be opened at the seam or closure by samplers or commercial emptiers. Samplers, however, can probe the contents of a bag if they do not tear or damage the fabric. Also, the order prohibits sales of second-hand textile bags to users unless the bags have been repaired and all holes mended or patched.

2. No new or used textile bag can be used for packing mohair unless the word "mohair" appears in legible type on both sides of the bag.

3. "Commercial emptiers," defined as persons acquiring more than 400 used textile bags in any one of the past six months through removing their contents, must, when they acquire bags, use or dispose of an equal number within 60 days. This will prevent excessive accumulation of empty bags.

4. No. 1 wool bags, which can be repacked to capacity with grease wools, must be used for packing only Territory, California or Texas wools. This provision applies only for bags acquired after today.

5. No. 2 wool bags, acquired after today, used for packing grease wools but which cannot be filled to capacity, are restricted to packing of fleece wools.

6. If wool bags no longer are capable of carring grease wools, they can be used only for packing scoured wools, noils, or wool vastes. If unsuited for this purpose, there is no restriction of their use.

7. Wool pouches imported from Australia, New Zealand, or South Africa acquired after today may not be used for any purpose other than packing wool or wool products.

Exempted from provisions of the order are cotton textile bags for the Army, Navy, Maritime Commission and War Shipping Administration. In addition, burlap bags made from material set aside in the stockpile under provisions of M-47 are exempt.

The amendement to M-107 (cotton textile for use for bags), in addition to deleting restrictions on the use of such bags, also makes these two changes in the order: (1) Establishes an A-2 rating for acquisition by bag manufacturers of the fabrics listed in the order. Bag manufacturers can also resell the material to others holding an A-2 rating for use for essential purposes. (2) Use of the rating is extended to Canadian bag manufacturers.

The amendment to M-47 makes these revisions: (1) Burlap can be removed from the stockpile (into which 2/3 of our burlap imports go) on an A-1-c rating or better granted on any of these applications: PD-1A, PD-3A, PD-300, and PD-408. (2) Importers and importing bag manufacturers must make available to non-importing bag manufacturers who bought from them in 1939 and 1940 the same percentage of burlap, compared to total deliveries to non-importing bag manufacturers as in the two specified years. Manufacturers receiving burlap under this provision can put it into process for agricultural bags within 60 days, instead of the previous 30 days allowed.

It was pointed out that the Defense Supplies Corporation has been authorized to purchase stocks of burlap frozen last December by M-47.

Office Of War Information

War Manpower Commission

Plans being made by the War Manpower Commission in collaboration with the Department of Agriculture to provide labor for record agricultural production in 1943 call for a highly mobile army of experienced full-time farm workers, aided by corps of local volunteers to meet peak-season demands, WMC Chairman Paul V. McNutt announced today.

"The program will be worked out in detail during the winter months and launched as soon as spring planting begins," Mr. McNutt said.

The program includes:

1. Full-time continuous employment of mobile groups of experienced farm workers, transported at government expense from one area to another as the crops mature.
2. Relaxation of legal barriers which now restrict the complete mobility of labor between States.
3. Transfer of experienced farm operators and workers now on sub-standard lands to productive areas of labor demand.
4. Expansion of the U. S. Employment Service farm placement machinery for direction of farm labor movement and full scale mobilization of local volunteer groups.
5. Adjustment of farm wages to bring the income of farm workers more nearly into line with those of industrial workers.
6. A farm labor training and management program, now being developed by the Department of Agriculture and the U. S. Office of Education. This will aid farmers to make the most effective use of the fewer number of experienced workers through expert supervision, training and upgrading.

"Next year's farm-labor problem will be critical," Mr. McNutt said. "Increased lend-lease shipments, the growing size of our Army and Navy, and America's pledge to feed the half-starved populations of countries freed from the Nazi yoke, will make tremendous demands on our farms. We must produce more food than ever before. We will have to produce it with less labor.

"Our experience during 1942 proves that we can do it. Nowhere have we been able to uncover evidence of any important crop loss due to manpower shortage. On the contrary, not a single basic product of the farms was produced in less quantity this year than last.

"Total farm production was nearly 12 percent greater than the all-time high of 1941. Net farm income for 1942, including government payments, is estimated at nearly $9,800,000,000—about a billion more than the previous record of 1919.

"The uniformly good weather deserves a lot of credit for this huge yield. But government efforts to recruit farm labor and the splendid cooperation of many communities and individual farmers also had a lot to do with it.

"Through October of this year, the U. S. Employment Service placed nearly 3 million farm workers—60 percent more than during the same period of 1941. Despite transportation shortages, nearly 12,000 farm workers were moved under a joint Farm Security Administration Employment Service Program from one area to another to meet emergency demands for seasonal labor. In many parts of the country whole communities turned out to harvest perishable crops. And many farmers cooperated by raising wages, providing transportation and housing, and by hiring inexperienced people.

"Under a plan for hiring domestic and foreign farm labor, Mexican workers were provided for the California sugar beet harvest, Chicago workers for the Yakium Valley apple orchard of Washington, and Kentucky workers for sugar beets in Michigan and fruit and vegetable farms along the Atlantic Coast.

"This plan can work well everywhere if all parties abandon special interests and concentrate on getting the necessary crops in. If it does not work, however, we will have to try something else. Farmers may be certain that the government will take whatever steps are necessary to assure enough labor for 1943's record agricultural goals," Mr. McNutt said.

Syrup Ceiling Announced

The Office of Price Administration has fixed the cane syrup ceiling price for "Louisiana Type" cane syrup at 35 cents a gallon net f.o.b. plantation in tank cars or tank trucks supplied by the buyer, or $3.25 per case of six number 10 tins. This announcement is received from Washington as we go to press with this issue of the *Sugar Bulletin*. The full text of the O.P.A. order will be published in our January 15th issue.

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Seven-Point Program for 1943

(By C. J. Bourg)

The American Sugar Cane League in its effort to cooperate completely with the U. S. Government in the food production program, and in order to facilitate the participation of sugarcane growers and processors in the war effort, has adopted seven main objectives, as enumerated by the Executive Committee:

1. To secure a sufficient number of *workers* needed for the cultivation and harvesting operation in connection with the 1943 crop, through cooperation with the Manpower Commission and the U. S. Employment Service and the Labor Division of the Food Administration, particularly with reference to transient labor, deferment from draft and the maintenance of technical employees in field and factory.

2. Congress having declared that all farmers should receive *parity* prices for their products, the League will continue to exert every effort to obtain for sugarcane growers parity on sugarcane. This includes the effect that any price ceiling on sugar or molasses may have upon the price received for sugarcane.

3. *Bags* being difficult to obtain because of reduced imports of jute and the tying-up of second-hand bags, the League is requesting that in all contracts made by the U. S. Government, chiefly with Cuba and Puerto Rico, that some safeguard be included to protect the supply of sugar bags available for the marketing of Louisiana sugar.

4. *Action by Government* agencies which is more prompt and timely is desired because many regulations and determinations have been issued so late as to disrupt the industry and bring about a retroactive effect. In the reorganization of the Department of Agriculture for food administration purposes, it is the hope and objective of the sugar industry that all matters will be handled more promptly and determinations issued in advance of being applied.

5. The overwhelming quantity of *questionnaires,* applications and other forms being required by Government agencies of growers, processors and distributors has created a universal protest and appeal to Washington for reducing the number by at least 90 per cent, in which protest and appeal the League has joined vigorously.

6. In view of the production goals and the need for more sugar produced on the continent, arrangements are being made for ample supplies of *fertilizer.* Approximately 8,000 tons of cyanamid have already been made available to sugarcane growers and there is a possibility of obtaining a few more tons. Nitrate of soda is expected to be available earlier and in larger quantities than last year, but growers are urged to place their orders for fertilizer immediately so that there can be a full fertilization and cultivation of the 1943 crop. Growers must order fertilizer through the usual distributors or local agents.

7. *Farm machinery* is needed more than ever because of labor shortages and the League urges WPB to permit production of new mechanical implements and to make them available to farmers. Wherever farm machinery is mounted on rubber, farmers should be granted priority on tires to keep these implements operating at greatest efficiency.

Necessarily, these chief objectives are not at all exclusive and every effort is being made by the League to anticipate any needs, so that the problems of sugarcane growers may be reduced to a minimum, mindful of the fact that in war time adjustments and sacrifices are absolutely necessary for victory.

(Continued on page 58)

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In connection with the seven-point program of the League, contacts have already been made with officials of farm machinery at WPB and the Office of Agricultural War Relations.

The control of the production and distribution of farm machinery has been established under L-170. Limitations Order L-170 limits the production of each type and kind of mechanical farm implements. The bases of the individual limitations are the scarcity of steel and other materials used, and the essentiality of the implement.

For instance, in the case of the sugarcane harvesters, the limitation is 51 per cent of the production in 1940 or 1941, whichever is higher. The production of repairs parts for cane harvesters is limited to 130 per cent of the average production in 1940 and 1941.

At the present time, the Secretary of Agriculture as the U. S. Food Administrator is demanding that more steel be allocated for the production of farm machinery. The WPB is resisting this demand because there is or will be just so much steel available in 1943. If more steel is to be used for farm machinery, then less steel will have to be used in other construction. It is the opinion of most of us in Washington that some adjustments will be made in favor of farm machinery, and the machinery selected for greater production will depend upon the essentiality of the farm product and the actual need for new machinery and repair parts. Until adjustments are agreed upon, the limitations of L-170 will be enforced.

Any manufacturer who can establish that certain essential foods will be reduced in production as a result of the limitations under L-170, or who can show that the base period of 1940 and 1941 works a hardship, has the right to submit an appeal for higher percentages. Such an appeal will be acted upon from the standpoint of the individual manufacturer and it will also serve as information regarding the needs for farm machinery in connection with certain foods.

The question has been asked whether plantations that operate machine shops are eligible. From the standpoint of materials for maintenance, repair and operating supplies, these machines shops must use the PD1-A application. This is particularly true in connection with welding rods, of which there is a scarcity and individual priorities are required.

Farmers do not have to submit a preference rating or priority when ordering farm implements or parts. The question has also been asked whether a supplier has a right to demand a preference rating from a plantation owner, who is a farmer. If the machine shop where the repair work is done is also engaged in making repairs for a sugar factory, obviously the exemption to farmers does not apply. In fact, WPB officials tell me that it would destroy the program of restricting the consumption of steel to essential war needs, if they permitted machine shops or even blacksmith shops to build up big stocks of supplies and repair parts. Therefore, if your supplier insists upon a preference rating to cover your order, the most practical course to be taken is to submit a PD1-A application, including the statement explaining the supplier's refusal and the preference rating which he demands.

It is to be expected that the Food Administrator will force action very soon regarding additional steel for farm machinery, especially with regard to implements that are needed in the spring. In the meantime, it is our recommendation that all sugarcane growers submit their orders for new machinery and repair parts without delay so that they may be considered in connection with any change in Government policy.

Syrup Ceiling

Official Release by the Office of Price Administration

Fixed dollars and cents price ceilings on sugar cane syrup at all levels of distribution prior to wholesale and retail were announced December 28th by the Office of Price Administration, supplanting individual March 1942 maximums.

Action taken raises the ceiling prices for Georgia (or country type) cane syrup approximately 18 cents per gallon to cover increased costs occurring in the 1942 season, as March 1942 packers ceilings on this product under the General Maximum Price Regulation reflected 1941 costs.

At the same time, OPA also set similar specific dollars and cents price ceilings on Louisiana (or large mill type) cane syrup. These fixed Louisiana prices will reflect the average March 1942 sales level,

as these ceilings generally mirrored cost increases to date.

Consumers of Louisiana cane syrup, who customarily use this staple article as a spread on bread, a sweetening agent and substitute for sugar thus may be assured of no general price increase in their present retail costs.

The retail cost to the consumer of acquiring a No. 10 size tin of Georgia type cane syrup—containing about a week's supply of the product for the average Southern family—will be about $1.10, following forthcoming adjustments at wholesale and retail. This would be 15 to 18 cents more than the current price. This added price incentive should effect a diversion of such supplies from illegal channels into normal food channels.

Following the recent pattern of uniform OPA food price regulations, fixed dollar and cents ceilings are set on a base price system for all cane syrup sales made by Louisiana packers. Packers of Georgia syrup will continue to sell at a delivered price in the Southern United States, and on a base price system elsewhere in the Country. Cane syrup shortly will be added to the list of food commodities already covered at wholesale and retail by specific fixed percentage margins over net cost. These mark-ups are being set in the near future for the various classes of wholesale houses and retail stores.

An amendment to the regulation will permit farmers who sell at the wholesale and retail level to fix their maximum prices at levels comparable with wholesalers and retailers.

The move at all levels up through the packer is effected by Maximum Price Regulation No. 291 (Certain Syrups and Molasses), effective December 24. This regulation is so drawn that as specific maximum prices are fixed for other syrups, molasses or blends, they may be added to the two types of cane syrup.

OPA officials stressed the fact that the regulation refers to Louisiana cane syrup, but the term simply indicates a type produced by large mills which, are largely concentrated in that state; that in their reference to Georgia cane syrup they mean a type produced by small country mills, many of which are owned by farmers themselves. Other states producing quantities of cane syrup are Mississippi, Alabama, Florida, Texas and Arkansas. Production occurs in the fall and winter months.

The new regulation covers Louisiana type producers, who sell to packers. The latter place it in cold storage for use when needed. In addition to producers and packers, the country type cane syrup is covered at the accumulator level. This middleman is the factor who gathers the stock of several farmers and resells it to packers.

Annual cane syrup output in this country averages 18,000,000 gallons with a producer "money value" of some $8,000,000 and a retail value of $20,000,000.

The following tabulation lists the specific maximum prices set for Louisiana cane syrup:

(1) *Producers Level*:

35 cents per gallon, net f.o.b. producers' mill or factory in tank cars or tank trucks supplied by the buyer; ½ cent per gallon higher in barrels or half barrels. (The term barrel means a wooden container for liquids having a 55-gallon capacity; the half-barrel means 33 gallons capacity).

(2) *Packer Level*:

(a) Packers' maximum prices in tank cars, barrels, or other large containers to all classes of purchasers are as *follows:

40 cents per gallon in tank cars furnished by the seller.

54 cents per gallon in barrels furnished by the seller.

58 cents per gallon in half-barrels furnished by the seller.

62 cents per gallon in 10-gallon cans furnished by the seller.

64 cents per gallon in 5-gallon cans furnished by the seller.

*provided that the syrup has been stored by the packer and repacked or reloaded by him into the above cars, barrels or cans. A packer of Louisiana cane syrup means any person who customarily stores and repacks or reloads cane syrup with or without processing, mixing or blending.

(b) Packers' maximum prices at the factory for Louisiana cane syrup packaged in cases for the wholesale and chain stores trade in less than carload lots shall be:

$3.25 per case of 6 No. 10 cans.
$3.50 per case of 12 No. 5 cans.
$3.75 per case of 24 No. 2½ cans.
$4.25 per case of 48 No. 1½ cans.
$3.25 per case of 36 No. 1½ cans.
$2.18 per case of 24 No. 1½ cans.

If the packer has established differentials for any other class of purchaser or for larger quantity purchases, he must continue such differentials. Also discounts and other allowances must be continued. When the Packer sells the syrup at a place other than the factory, his maximum price is quoted as the factory price f.o.b. New Orleans and his delivered price is his factory price plus the freight at the lowest available freight rate from New Orleans to point of destination. In no case shall the purchaser be required to pay the packer more than the packer's factory price plus the lowest available freight rate from New Orleans to point of destination.

The following tabulation lists the specific maximum prices set for Georgia cane syrup:

(1) *Producer Level*:

60 cents per Georgia gallon net f.o.b. accumulator's shipping point in barrels supplied by the seller for highest grade A-1 syrup. (A Georgia gallon at 39° beaume at 20° centigrade weights 10.847 pounds. A standard U. S. gallon of Georgia cane syrup at 39° beaume at 20° centigrade is equal to 1.05 Georgia gallons of Georgia cane syrup).

57 cents per Georgia gallon, net f.o.b. accumulator's shipping point in barrels supplied by the seller for second grade No. 1 syrup.

50 cents per Georgia gallon, net f.o.b. accumulator's shipping point in barrels supplied by the seller for third grade, No. 2 syrup.

(2) *Accumulator Level*:

61 cents per Georgia gallon, net f.o.b. accumulator's shipping point in barrels supplied by the seller for highest Grade A-1 syrup.

58 cents per Georgia gallon, net f.o.b. accumulator's shipping point in barrels supplied by the seller for second grade, No. 1 syrup.

51 cents per Georgia gallon, net f.o.b. accumulator's shipping point in barrels supplied by the seller for third grade No. 2 syrup.

(3) *Packer Level*:

(a) Packer's maximum prices for Georgia cane syrup delivered to all places in the "southern zone" —including the states of Georgia, Alabama, Florida,

North Carolina, Louisiana, Mississippi, Arkansas and Texas are:

$4.70 per case of 6 No. 10 cans.
$4.95 per case of 12 No. 5 cans.
$5.20 per case of 24 No. 2½ cans.
$5.70 per case of 48 No. 1½ cans.
$2.90 per case of 24 No. 1½ cans.

(b) Backers' maximum prices for Georgia cane syrup delivered in all places outside the "southern zone" shall be the following, f.o.b. Cairo, Georgia, prices, plus the lowest available freight rates to point of destination.

$4.45 per case of 6 No. 10 cans.
$4.70 per case of 12 No. 5 cans.
$4.95 per case of 24 No. 2½ cans.
$5.45 per case of 48 No. 1½ cans.
$2.77 per case of 24 No. 1½ cans.

Maximum prices set for both Georgia and Louisiana cane syrup reflect to producers the highest prices required by the Emergency Price Control Act of 1942,

TITLE 32—NATIONAL DEFENSE
CHAPTER XI—OFFICE OF PRICE ADMINISTRATION
PART 1351—FOOD AND FOOD PRODUCTS
MAXIMUM PRICE REGULATION NO. 291—CERTAIN SYRUPS AND MOLASSES

In the judgment of the Price Administrator it is necessary to stabilize prices for syrups and molasses in order to effectuate the purposes of the Emergency Price Control Act of 1942 as amended, and Executive Order No. 9250. The present prices for syrups and molasses are governed by the General Maximum Price Regulation[1] which fixes the maximum prices as the highest prices each seller received for these commodities in March 1942. Since these products are produced seasonally, this "freeze" technique has not in all cases proved satisfactory. Consequently, it becomes necessary to issue this Maximum Price Regulation No. 291 setting specific prices which in the judgment of the Price Administrator, are fair and equitable to both producer and consumer and which effectuate the purposes of the Act.

The Price Administrator has advised and consulted, so far as practicable, with members of the industry who will be affected by this Regulation. The Price Administrator has also ascertained and determined that the maximum prices established for the agricultural commodities covered by this regulation, will reflect to producers a price equal to or higher than the prices specified in the Emergency Price Control Act of 1942, as amended and Executive Order No. 9250.

[1] 7 F. R. 3153, 3330, 3666, 3990, 3991, 4339, 4487, 4659, 4738, 5027, 5192, 5276, 5365, 5445, 5484, 5565, 5775, 5783, 5784, 6007, 6058, 6081, 6216, 6615, 6794, 6939, 7093, 7322, 7454, 7758, 7913, 8431, 8881, 8942, 9004, 9435, 9615, 9616, 9732, 10155, 10454.

Practices which will help reach Sugar Cane Production Goal of 1943

(By J. G. Richard, Assistant Director and State Agent, Extension Service, E. C. Simon, Assistant Sugar Cane Investigator, Experiment Station)

1. Farmers should not destroy good stubble cane.
2. Good drainage is the basis for efficient sugar cane production. Use as far as practical, mechanical means so as to conserve labor .
3. Make efficient use of fertilizer by applying it early in the spring, using at least 36 pounds of nitrogen per acre on all stubble crop, and at least 18 pounds of nitrogen per acre on plant cane where fertility has not been maintained by use of legumes.
4. Early germination of sugar cane will make for more efficient production. This can be helped by early and proper removing of dirt from planted cane stalks and stubble pieces after danger of late cold spells is over.
5. Deep cultivation of sugar cane should be done early and followed by shallow cultivation and an early lay-by so as to avoid cutting roots.
6. Borer Control: Dust with cryolite at second generation of borers and use parasites where necessary. (Consult county agent.)
7. Disease Control: Select seed cane plots. For 1943 fall planting use commercially disease free and borer free seed cane, which may be obtained by rogueing, selection, dusting, and, where practical and necessary use hot water treatment for chlorotic streak. (Consult county agent.)

Industry Committee Recommends 40 Cents Minimum for Sugar Factory Workers

A minimum hourly rate of 40 cents in the sugar and related products industry was recommended by an industry committee on January 5th to L. Metcalfe Walling, Administrator of the Wage and Hour and Public Contracts Division of the U. S. Department of Labor.

The recommendation followed a one-day meeting under the chairmanship of Theodore J. Kreps of Palo Alto, Calif., professor of economics at Stanford University. The committee was made up of 18 persons representing employers, employees and the public.

The Committee received, considered and filed briefs from the American Sugar Cane League of the United States and the Hawaiian Sugar Planters Association proposing changes in definition of the industry. The National Sugar Refining Company, in a brief, urged that present North-South wage differentials be abolished.

The 40 cent hourly wage minimum would increase the wages of approximately 12,000 of the 60,000 employees of the industry. The Administrator will next hold a public hearing on the recommendation.

Nitrogen Fertilizer

The following letter is of interest to the Louisiana sugar cane producers:

United States Department of Agriculture
Office for Agricultural War Relations
Washington
December 22, 1942

Reply is made to your letter of December 11 in which you set forth your requirements for nitrogenous fertilizer for sugar production. First of all we wish to emphasize that we are opposed to any practice which would necessitate any farmer purchasing mixed goods when he needs only chemical nitrogen. We are doing everything in our power to prevent such a trade practice.

Insofar as we are aware at least 7,500 tons of cyanamid are at present earmarked for Louisiana for sugar production. There is a possibility that additional quantities may be made available. In any event, farmers in that area are entitled to 100% of the chemical nitrogen they purchased and applied during the 1940-41 season.

It is expected that commencing January, 1943, very large quantities of sodium nitrate will be distributed monthly for direct use. As a matter of fact, the tonnage will be considerably in excess of 100,000 tons per month for the southeastern states. In our effort to insure equitable and adequate distribution, the sugar growers should obtain their share. Perhaps it is appropriate to note that a considerable quantity of cyanamid is also to be made available to supplement sodium nitrate and ammonium sulfate. In the aggregate, there should be enough nitrogenous fertilizer to take care of our crops.

Chemical Division
U. S. Department of Agriculture

Food for Freedom

We are printing below the general Louisiana goals for 1943 Food For Freedom Campaign which was adopted at a recent meeting of the Louisiana War Board.

Louisiana farmers set a lot of new records in 1942, but they have an even higher mark to shoot at in 1943. They are being called on to join other farmers throughout the nation in making a supreme effort to increase to even greater levels the production of almost all important foodstuffs, to supply even greater quantities of the food we and our allies must have if we are going to win the war.

Food must be available to accompany every new striking force launched by the United Nations as well as to maintain those already in action. Food must be available to keep the home fronts strong. Food must be available for the peoples set free to help them add their strength to the fight against the Axis. It is an indisputable fact that one of the factors causing the capitulation of the French in Africa was the guarantee of food to the starving soldiers and their families. Food is a powerful weapon.

The U. S. civilian population operates the arsenal of the United Nations. This population must be fed out of U. S. production, just as the British population and Russian population must be fed, so far as possible out of home production.

Civilians in the United States are working harder than ever before. They want more food and they have more money with which to buy it.

A worldwide operation such as is involved in supplying the food for the United Nations war operations requires organization and planning. The people of each nation cannot go on blindly turning out what they have been accustomed to turning out. The customary production may or may not fit the war needs of the United Nations. Food is too important a weapon to allow chance to dictate its supply.

Hence the United Nations have been planning ahead for food supply just as for munitions supply and military operations. The goals for food and other farm production in the United States have been set as part of the total strategy of the United Nations.

It all adds up to the greatest demand for food the world has ever seen. The greater part of the responsibility for production of food for shipment to the other United Nations rests with farmers of the United States. They have the greatest resources for food production and the best geographical location for shipment to the fighting fronts of the world. *Farm production in the United States is an essential part of war production for the United Nations.*

Military and lend-lease buying is expected to take 25 per cent of our total food production in 1943, as compared with 13 per cent in 1942 and 4 per cent in 1941. The farmers' job will be bigger and more difficult and more important in 1943. Total farm production in 1942 is estimated at 11 per cent above 1941. Farmers set a new record for farm production in 1940, bettered that in 1941, and set another new record for the third year in succession in 1942.

The 1943 goals call for a 10 per cent increase in production of livestock products and the same total crop acreage as in 1942. The shifts in crop production in 1943 will be more important than total crop acreage. The most important changes from 1942 represented by the goals for 1943 are these: More meat and milk, more poultry and eggs, more of the vegetables high in food value and less of those low in food value in relation to volume, more corn and less wheat; more peanuts and soybeans for food and oil; more long-staple cotton and less short staple; more potatoes, and more dry beans and peas.

The LOUISIANA GOALS, which, of course, are figured on a basis of the national goals, follow:

Sugarcane

Approximately 300,000 acres of sugarcane for sugar in Louisiana—about 40,000 acres is Florida's goal. This would be a slight increase in acreage over 1942 and on the basis of the average yield should utilize about all the processing capacity.

Rice

Approximately 607,000 acres of rice in Louisiana. This is about three per cent less than the 1942 acreage. Rice production is limited by the fact that some of the land used for rice production in 1942 will not be available for growing rice in 1943 and by the fact that suitable land for rice production is limited. It would be difficult to get equipment for irrigating more land for rice production.

Rice produced in the United States is now needed in the Caribbean area which formerly secured large quantities from the Far East. With this supply cut off, the United States is the only source for our neighbors to the South. However, since the stock of rice increased more than 4,000,000 bushels in 1942, the 1943 goal is expected to meet all needs.

National Goal: 1,380,000 acres, or—7 per cent.

Cotton

Long staple: 106,000 acres, as compared to an estimated 72,000 acres in 1942, an increase of 47 per cent. Because of the need for long-staple cotton in military goods, a substantial increase is needed in 1943 in the acreage of varieties that will produce cotton stapling 1 and 1/8 inch or longer. This increase is to be brought about by encouraging producers to shift to longer staple varieties within their present acreage allotments.

All cotton: 1,080,000 acres, slightly less than acreage that was planted in 1942. Since we have on hand about a two-year supply of short-staple cotton, less than one inch, farmers normally producing short staple are being urged to switch to other war crops or, where practical, to long staple cotton. In preparation for the 1943 season it will be important for farmers to save the available stocks of seed of the longer-staple varieties.

Although the acreage allotments in 1943 will be the same as in 1942, the AAA program has been arranged to offer as much aid as possible to farmers who want to shift from short-staple cotton to war crops.

NATIONAL GOAL: 22,500,000 acres, or -6 per cent.

Milk

Approximately 700,000,000 pounds in 1943 as compared to an estimated 670,000,000 pounds in 1942, an increase of 4 per cent. This would call for an increase of 3 per cent in the number of cows on farms in Louisiana and for a slight increase in production per cow.

The need for milk and the uses to which it is put are too evident to be discussed. The national goal for 1943 is somewhat above actual production for 1942 but is still below the 1942 goal. Still greater production is highly desirable, since even if the 1943 goal is met, it probably will fall about 7,000,000,000 pounds short of total requirements.

NATIONAL GOAL: 122 billion pounds of milk and 2 per cent increase in dairy cows.

Pork

Approximately 122,000 sows farrowing between December 1, 1942 and June 1, 1943, and approximately 100,000 farrowing between June 1, 1943, and December 1, 1943. This is an increase, in both cases, of about 5 per cent.

Since an increase in next year's pig crop will not contribute to increased slaughter except in the last quarter of the year, it has been suggested that all hogs be fed to an average of 10 pounds heavier than usual before marketing; 1943 requirements for military and lend-lease are expected to exceed the 1942 demand for those purposes by 1,500,000,000 pounds.

NATIONAL GOAL: Spring pigs—71,300,000, or + 15 per cent

Fall pigs—50,000,000, or + 15 per cent

Cattle and Calves

Marketing and farm slaughter in 1943 should total about 407,000 head, as compared to 368,000 head in 1942, an increase of 11 per cent. To meet the national goal for beef production may require a slight reduction in the total number on farms, but this is not expected to be the case in Louisiana. Cattle feeding must be continued at a high level.

NATIONAL GOAL: Cattle AND CALVES to be slaughtered 30,400,000, or + 90 per cent

NUMBER ON FARMS DECEMBER 31, 1943: 75,774,000 or —1%

Sheep and Lambs

Marketing and slaughter of sheep and lambs in 1943 should total about 58,000 head in Louisiana as compared to 46,000 head in 1942, an increase of 26 per cent over 1942, but will give a total number comparable to 1941.

NATIONAL GOAL: 24,100,000 head, or — 2 per cent

Eggs and Poultry

The Louisiana egg production goal has been set at 30,256,000 dozen in 1943 as compared to an estimated 28,015,000 dozen in 1942, an increase of about 8 per cent. To meet this will call for an increase in the number of hens and pullets in 1943 and a slight increase in production per bird.

Louisiana farmers also have been asked to increase the production of chickens on farms by 9 per cent, to 35,957,000 pounds in 1943, this in order to help overcome the meat shortage.

On a national basis, poultry growers have been asked to increase egg production 10 per cent and poultry meat 28 per cent over 1942. Requirements for military forces and lend-lease have increased rapidly and it is expected that about 1,220,000,000 dozen eggs will be dried for these uses in 1943.

A total of about 4,000,000,000 pounds of poultry will be needed to help overcome the meat shortage. It is recommended that birds be fed to weights averaging not less than three pounds before marketing.

NATIONAL GOAL: HENS AND PULLETS: 455,000,000 HEAD, OR + 7 per cent.

EGGS: 4,344,704,000 dozen, or + 10 per cent.

Turkeys

Louisiana farmers have been asked to raise 75,000 turkeys as compared to an estimated 65,000 in 1942, an increase of 15 per cent and to increase production of turkeys for meat to 1,051,000 pounds in 1943 as compared to 905,000 pounds in 1942, an increase of 16 per cent.

NATIONAL GOAL: 38,699,000 HEAD OR + 15 per cent.

Corn

Approximately 1,500,000 acres in 1943 as compared to 1,440,000 acres in 1942, an increase of 4 per cent over 1942, but somewhat less than 1941.

NATIONAL GOAL: 95,000,000 ACRES, OR + 4 per cent.

Oats

115,000 acres in 1943 as compared to 100,000 acres in 1942, an increase of 15 per cent.

NATIONAL GOAL: 37,300,000 ACRES, OR — 8 per cent.

Tame Hay

Approximately 350,000 acres in 1943, as compared to 359,000 in 1942 a decrease of 3 per cent.

NATIONAL GOAL: 59,000,000 ACRES, OR — 2 per cent.

Peanuts for Oil

Approximately 75,000 acres in 1943 as compared to 45,000 acres in 1942, an increase of 67%. Individual farm goals will be established for peanuts and full Triple-A payments will be made only to farms planting 90% or more of their peanut goals.

NATIONAL GOAL: 5,500,000 ACRES, OR + 31 per cent.

Soybeans for Oil

Approximately 120,000 acres in 1943 as compared to an estimated 85,000 acres in 1942, an increase of 41 per cent. Individual farm goals will be established for soybeans for beans and full Triple-A payments will be made only to farms planting 90% or more of their goals.

The importance of these two crops, soybeans and peanuts for oil, has been emphasized so often in the past as to need no further explanation here. The vegetable oil shortage is still one of our most serious shortages and soybeans and peanuts for oil are still among our most important war crops.

NATIONAL GOAL: 10,500,000 ACRES, OR — 3 per cent.

Irish Potatoes

Approximately 47,000 acres in 1943 as compared to 46,000 acres in 1942, an increase of 2 per cent.

NATIONAL GOAL: 3,160,000 ACRES, OR + 11 per cent.

Sweet Potatoes

Approximately 83,000 acres in 1943 as compared to 82,000 in 1942.

NATIONAL GOAL: 757,000 ACRES, OR 0 per cent.

Gum Naval Stores

Louisiana's production of gum naval stores is expected to decrease from 1,500 units in 1942 to 1,000 units in 1943, because of labor and material shortages.

NATIONAL GOAL: 350,000 UNITS (ONE UNIT INCLUDES 1 BARREL TURPENTINE AND 3 1/3 BARRELS ROSIN)

Hay Seed

Approximately 1,000,000 pounds of lespedeza seed harvested from about 7,000 acres in 1943.

NATIONAL GOAL: 200,000,000 POUNDS.

Labor

Workers on dairy, livestock, and poultry farms have been "frozen". Plans are being worked out for deferring from selective service all "essential" farm workers. U.S.D.A. War Boards have a responsibility to help in getting the public to understand that these deferred workers are performing jobs just as important as those performed by soldiers and sailors.

Farm Equipment and Supplies Program

Even though farm machinery will be scarce, an effort will be made to place the machinery where it will do the most good. Farm machinery rationing committees, operating under the direction of the U.S.D.A. War Boards, will review applications for purchase of new machinery and issue purchase certificates for applications which they approve.

Fertilizers

The supplies of nitrogen, phosphorus, and potash govern the supply of fertilizers. Of these, nitrogen is the most critical, largely because the military will require nearly all synthetic nitrogen the nation can produce and sufficient ships are not available to import all of the nitrates needed.

In 1941 the U. S. used 420,000 tons of nitrogen as fertilizer. The total that may be available for use this year, 1942-43 is 359,000 tons, not including oilseed meals or the July 1 carryover estimated at 15,000 tons.

It is expected that 350,000 tons of cottonseed meal, peanut meal and soy bean meal will be used to supply nitrogen for crop production.

The phosphate supply is adequate to meet probable demands, but the potash situation falls between the short nitrogen supply and the adequate phosphate supply.

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Fight on Molasses Price Won

(*By C. J. Bourg*)

Restrictions in General Preference Order M-54 forbidding molasses produced in Louisiana from being used or resold for the manufacture of mixed feed or vinegar, or for ensilage or direct feed, were removed January 21st by the Director General for Operations through the issuance of M-54 as amended.

The order had been previously amended November 2, 1942, to include the above restrictions. This action was taken because substantial shrinkages in imports of molasses made it necessary that industrial alcohol plants in the New Orleans area get first call on available molasses supplies.

Since November, however, imports have increased to the point where there is now on hand a supply of molasses sufficient to permit operation of Louisiana alcohol plants for at least six months.

The active fight which Senator John H. Overton has been making for the Louisiana sugar industry at the instance of the American Sugar Cane League, in connection with the restrictions on the marketing of the 1942 production of molasses, brought about the rescission of the order issued by the War Production Board last November.

Under the WPB Order M-54 Louisiana producers were prohibited from delivering molasses to manufacturers of feed, ensilage or vinegar, after November 2, 1942. The effect of this order was to shut all markets to Louisiana molasses except the alcohol distilleries. The OPA had placed a ceiling of 18c f.o.b. plantation on blackstrap molasses, but they had also placed a ceiling price on alcohol which made it impossible for distillers to pay more than 2.685c per pound of total sugars in molasses. As the normal sugar content in Louisiana blackstrap is 52 per cent, this would have meant a price of about 16-1/3c per gallon.

The producers of molasses have always sold f.o.b. plantation, while the distillers have bought off-shore molasses f.o.b. distillery. Thus, the question of disturbing the normal business practices and whether the buyers or the seller should pay the freight charges became a point of major contention.

At the request of the American Sugar Cane League, Senator Overton demanded that the agencies of the U. S. Government, which had created the difficult situation on molasses, should provide relief for the producers. The Senator explained that the 17,000 farmers in Louisiana who produced sugarcane were all interested in this matter because by the terms of the contract, under which sugarcane is purchased by processors, the grower receives one-half of the net returns above 8c per gallon, based upon the season's average price for molasses at New Orleans.

Senator Overton took the position that OPA had authorized a price of 18c per gallon and the feeders were anxious to buy the Louisiana product at the ceiling price. This, the Senator claimed, placed the responsibility upon WPB either to arrange for the refund of the freight charge, which would otherwise be absorbed by the molasses producers; or to rescind the prohibition of November 2nd, so that Louisiana producers could obtain the ceiling price in the feeders' market, which has been open to all producers of molasses except those in Louisiana.

Two precedents were cited by Senator Overton on the proposed refund of freight charges. One was the contract by which the Defense Supplies Corporation purchased the Cuban molasses f.o.b. Cuba and agreed to absorb the freight by selling the molasses to dis-

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Marcel J. Voorhies, Editor

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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.

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TONS OF CANE GROUND AND POUNDS OF SUGAR PRODUCED, LOUISIANA, 1942 CROP

Tons of Cane	4,734,321
Raw Sugar, pounds	597,007,929
Refined	98,932,592
Plantation Granulated	21,791,000
Crystals	12,129,100
Turbinados	48,676,875
Total Sugar Made	778,537,496
Total Sugar Made, Calculated to 96°	789,975,663
96° Sugar, Estimated in Commercial Molasses, lbs.	18,194,876
96° Sugar, Estimated in Magma	4,210,124
96° Sugar, Total Made & Estimated	812,380,663
96° Sugar Made & Estimated T/C	171.59

W. M. Grayson
Senior Chemical Engineer

tillers f.o.b. distillery at the rate of 2.685c per pound of total sugars; and the other was refund of freight on raw sugar from U. S. ports to refineries or from plantations in the mainland cane area to refineries.

The action of WPB in rescinding, effective January 21, 1943, the prohibition on sales of Louisiana blackstrap molasses to manufacturers of feed, ensilage and vinegar, will give the opportunity to all producers having stocks of molasses on hand to get the benefit of an open market and will increase the season's average price for molasses, with resulting benefits and participation by all growers of sugarcane in Louisiana.

Raw Sugar Allotments for Refiners Announced

The Director of Food Distribution has issued an order establishing raw sugar allotments for refiners in continental United States for the period January 1, 1942-September 30, 1943. These allotments, which may be changed from time to time, continue in effect the 1942 allotment basis established after public hearing and investigation by the Department of Agriculture and War Production Board.

This order, Food Distribution Order No. 7.1, supersedes WPB's Supplementary Order No. 98a, as amended July 29, 1942. It provides that no refiner may *purchase, import,* or *accept delivery of* raw sugar in excess of his allotment, and that all purchases, importations, or acceptances within refiner allotments may be made only upon specific authorization of the Director of Food Distribution.

The allocation for the 21 months ending September 30, 1942 follows in the order:

TITLE 7—AGRICULTURE
CHAPTER XI—Food Distribution Administration
(Director Food Distribution Order No. 7.1, Sugar)
Part 1430—Sugar
Raw Sugar Allotments

Pursuant to the authority vested in me by Food Distribution Order No. 7, dated January 15, 1943, issued pursuant to Executive Order No. 9280, dated December 5, 1942, and to effectuate the purposes of those orders, it is hereby ordered as follows:

Section 1430.6. *Allotments of Raw Sugar.*

(a) No refiner shall purchase, import, or accept delivery of raw sugar in excess of the allotment hereby established for the period from January 1, 1942, to September 30, 1943, for him in the amount set forth below opposite his name. Such allotment may be changed or modified from time to time by the Director of Food Distribution. All such raw sugar purchased, imported, or received by him between January 1, 1942, and the date of this order shall be charged against such allotment.

	Short tons Raw Value
American Sugar Refining Co.	1,489,462
Aron & Co., J.	69,078
C & H Sugar Refining Corp. Ltd.	823,114
Colonial Sugars Inc.	198,302
Godchaux Sugars Inc.	314,997
Henderson Sugar Refinery	116,847
Imperial Sugar Co.	202,323
Inland Sugar Co.	2,947
Liquid Sugars Inc.	15,437
W. J. McCahan Sugar Ref. and Molasses Co.	259,506

National Sugar Refining Co.	1,246,614
Pepsi-Cola Company	12,220
Realty Operators, Inc.	35,269
Refined Syrups & Sugars, Inc.	175,017
Revere Sugar Refinery	254,366
Savannah Sugar Refining Corp.	268,541
South Coast Corporation	74,579
Sterling Sugars, Inc.	47,845
Sucrest Corp. and Affiliates	167,178
Tea Garden Products Company	1,128
Western Sugar Refinery	253,595

(b) Purchases, importations, or acceptances of delivery within the allotment established in paragraph (a) hereof of raw sugar shall be made only upon specific authorization of the Director of Food Distribution.

(c) Supplementary Order M-98a of the War Production Board is hereby superseded. Any action heretofore taken or authorized by the Director General of Operations of the War Production Board pursuant to the provisions of Supplementary Order M-98a shall have the same force and effect as though taken or authorized pursuant to the provisions of this order. Nothing in this order shall be construed to affect any pending appeal under Conservation Order M-98, as amended and supplemented, and such appeal shall be considered under paragraph (c) of Food Distribution Order No. 7. Nothing herein shall be construed to affect any suit, action, prosecution, or other proceeding under Conservation Order M-98, as amended and supplemented, or the validity of any penalty, judgment or decree which may be or has been made or imposed thereunder.

Authority B. O. 9280, 7 F. R. 10179, F. D. O. No. 7, 8 F. R.)

Issued this 21st day of January, 1943.

Roy F. Hendrickson
Director of Food Distribution

Western Division Meets

The meeting of the Louisiana Sugar Producers' Club (Western Division) was called to order by President R. O. Young at 1:30 P.M., at Deare's Restaurant, New Iberia, Louisiana, on Friday, January 22, 1943. Those present were:

Dr. R. O. Young, President
G. L. Pace, Vice-President

Jules Burguieres
Serge Golodetz
L. M. Folse
John M. Caffery
J. P. Duhe
W. C. Kemper
St. Paul Bourgeois
Mike Marquette
Leon J. Landry
Harry D. Smedes
M. V. Yarbrough
Alphonse Labiche
John Bonin
Earl Chauffe
S. C. Munson
Lee Roane
Frank Bacque
E. P. Moresi
Ulysse Landry
J. J. Ozenne
R. E. Flournoy
Damas Moresi
Charles Caldwell
Paul Moresi
Robert J. Gauthier
Marcel J. Voorhies

Visitors:

Lt. Odom Bacque
C. A. Bell, State Engineer's Office
W. A. Sullivan

The following report of the Treasurer was approved and accepted:

Balance December 4th, 1942		$285.20
Meeting December 4th	$ 19.67	
Telephone Tolls	2.28	21.95
Balance January 22, 1943		$263.25

The same officers who served last year were re-elected for another year by acclamation. The officers are: Dr. R. O. Young, President, Youngsville, La.; G. L. Pace, Vice-President, New Iberia, La.; and Marcel J. Voorhies, Secretary-Treasurer, 414 Whitney Bank Building, New Orleans, La.

Dr. Young said that he felt that this informal organization, meeting rather regularly to discuss and consider the many problems constantly facing the industry, was making a distinct contribution to the welfare of the Louisiana Sugar Industry. Many problems have been solved which could not possibly have been satisfactorily solved by individual efforts. He stated that the personal contacts were making their contribution to a general feeling of good fellowship so essential in any industry. He thanked the American Sugar Cane League for its cooperative assistance.

Because of a surplus in the treasury, dues were not collected last year. It was felt by the group that 1943 membership dues should be collected in order to continue the monthly luncheon meetings. After some discussion it was moved, seconded and unanimously approved that the 1943 dues be set at $30.00 per mill.

The Secretary was instructed to advise the Parish Farm Agents of the sugarcane parishes west of the Atchafalaya that they are invited to every monthly meeting as honorary members and it is the wish of this group that the Farm Agents attend as regularly as they can arrange to do so. The Secretary was also instructed to work in cooperation with the Farm Agents so that a certain number of farmers be invited for each meeting.

Mr. Sullivan discussed the testing of scales and proposed cooperative effort among the factories. The President appointed the following committee to look into the matter and report to the group at the next meeting:

G. L. Pace, Chairman
Damas Moresi
W. F. Giles
Alphonse Labiche

In order to assist the group in keeping abreast of problems affecting the Industry it was decided to request members of the group serving on standing American Sugar Cane League Committees to make it their responsibility to inform this group of the significant activities of their respective committees. These members are:

LEAGUE COMMITTEE

W. C. Kemper, General League Activities
Robert J. Gauthier, Freight Rate Committee
W. F. Giles, Legislative Committee
John M. Caffery, Raw Sugar Committee
R. O. Young, Industrial Committee
S. C. Munson, Contact Committee
M. V. Yarbrough, Priority Committee
G. L. Pace, Stream Pollution Committee

Measures Available for the Control of Sugarcane Insect Pests in the Effort to Increase Wartime Sugar Production

(Summarized by J. W. Ingram, Entomologist, Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, United States Department of Agriculture)*

The continental United States in normal times depends on island possessions and foreign countries for a large part of its sugar supply. Temporary loss of the Philippines and the diversion of sugar-carrying cargo vessels to more vital wartime uses has decreased our sugar supply to the point where rationing is necessary, and special effort should be made to increase continental sugar production. Sugarcane and sugar beets are the two most important sources of sugar, and sugarcane is as well an important source of syrup, a valuable sugar substitute. Increased production of sugarcane has been asked for in the Food for Foreign Program.

It has been estimated that insects reduce the sugar production in this country by 180 million pounds annually. Much of this loss is preventable, and the more general application of the practical control measures now known is one way to aid in obtaining an increased supply of sugar. This paper discusses briefly the principal insect pests of sugarcane in the continental United States, with their distribution and recommendations for their control.

The Sugarcane Borer[1]

The sugarcane borer is the most important insect pest of sugarcane in the cane-growing region of the Gulf coast. The larva of this insect, which is the stage that causes the injury, is yellowish white with brown spots and is about 1 inch when mature. The full-grown larva then changes to a brown pupa in the tunnel made by the borer, and from this tunnel the straw-colored moth soon emerges. The insect is found in Florida south of a line drawn west from Daytona; in Mississippi in a strip 20 to 50 miles wide along the Gulf coast and in a small area around Centreville and south of that place; in Louisiana south of a line drawn west from Bougere through Coushatta to Zwolle; and in Texas in a strip 50 to 150 miles wide bordering on the Gulf. It has not been found in any other States and apparently has not spread much in recent years. It would be undesirable, however, to transport cane from infested to uninfested areas.

The following control measures are recommended by Ingram and Bynum (8):

(1) Make a more thorough clean-up of pieces of millable cane during harvesting operations to eliminate the overwintering of borers in these large pieces.

(2) After harvesting, thoroughly burn the trash as soon as it is dry, to destroy overwintering borers.

(3) During the winter cut and burn all large grasses in which borers might hibernate in and around fields.

(4) Cut lower when harvesting cane, to decrease the number of borers overwintering in cane stubs and to increase sucrose production.

(5) Flood fields for 3 or 4 days after harvest, if this can be done with little expense, to kill overwintering borers.

(6) Select seed cane as free from borer as possible, to secure a better stand and to decrease the number of borers overwintering in planted canes.

(7) For small plantings, if it can be done with little expense, soak seed cane in cold water for 72 hours to kill the borers in it before planting.

(8) Where agronomically practical, refrain from planting the susceptible variety C. P. 29/103 in areas of heavy borer injury.

In addition to the preceding, Wilson (10) and Scaramuzza and Ingram (8) have found that the parasitic wasp *Bassus stigmaterus* Cress., released several years ago, and annual breeding and release of the Cuban fly parasite *Lixophaga diatraeae* (Twons.) have aided materially in borer control in some areas of southern Florida.

In Louisiana, Ingram and Dugas (6) reported that a profitable degree of borer control has been obtained by dusting four times, at weekly intervals beginning with the hatching of the first borer eggs in the spring, with synthetic cryolite. The dust should be applied at the rate of 8 pounds per acre per application while the dew is on the plants. A lesser degree of control was obtained by dusting four times at weekly intervals beginning late in June for control of the second generation. Similar experiments are being continued to determine the value of dusting with synthetic cryolite, and recommendations will be made later on insecticidal control of the borer in Louisiana.

The Sugarcane Mealybug[2]

The sugarcane mealybug is found throughout southern Florida and Louisiana and on some farms in the northern parts of these States as well as in Georgia, Alabama and Texas. It is not known to occur in Mississippi.

The female mealybug, which is more commonly seen than the male, is a soft-bodied, grayish insect about one-eight of an inch long when full grown and is of a flattened-oval shape. She surrounds her body with a webby, mealy substance in which her eggs are deposited. Mealybugs are most often found feeding on the cane plant between the sheath and the stalk.

Mealybug control measures recommended by Holloway and Ingram (3) are as follows:

(1) Plant only clean (uninfested) seed cane.

(2) Plant the uninfested cane at some distance from fields where the mealybug occurs.

(3) Cut cane as close as possible to the surface of the ground so that the mealybugs will have less cane on which to feed during the winter.

(4) Destroy all scraps of cane left on the fields and around the mills after grinding.

(5) Avoid carrying the mealybug from place to place. Brush out wagons after they have been used in hauling infested cane to the mill. Live specimens should not be carried about for exhibition or for any other purpose.

Treatment of seed cane for 30 minutes in water held at 122° to 126° F. has been found to kill all stages of the mealybug. This treatment has been used by Clay Lyle, M. L. Grimes, I. E. Stokes, B. A. Belcher, and others to eradicate the mealybug from infested areas.

Warner (9), in Florida, killed all mealybugs in experiments near Quincy by soaking the seed cane in water of ordinary temperature for 7 days. Similar results were later obtained in experiments at Houma, La., by Ingram and Bynum.

The Sugarcane Beetle[3]

The sugarcane beetle, a black beetle which gnaws the young plant just below the surface of the ground in the spring, is found throughout the cane-growing area in the United States except in southern Florida.

Severe losses of stand have sometimes resulted from its attack.

Ingram, Bynum, and Douglas (7) recommend the following control measures:

(1) Plant the varieties of cane that give the most prolific stand, such as Co. 290, C. P. 29/116, and C. P. 28/11.

(2) Plow out sod areas on roadways and in adjacent pastures in spring, if practical, to eliminate breeding grounds.

(3) If a heavy infestation develops, some relief may be afforded by hand-picking or trapping with lights. In a test with the latter method clear lights of from 200 to 500 watts capacity attracted large numbers of beetles when the temperature was above 75° F. at 7:00 p.m. Lanterns and automobile headlights attracted small numbers. The beetles would land on the ground within a radius of about 12 feet, and in all cases it was necessary to pick up and destroy them. Lights should be operated from dusk to 9:00 p.m.

Liming of acid soils also appears to recrease beetle injury by increasing the number and vigor of the cane stalks.

The Sugarcane Weevil[4]

This small weevil, which is dark brown and about three-eights of an inch long, has not been found on sugarcane elsewhere than in Louisiana. The larva is white with an amber-colored head. It feeds below and just above the surface of the ground in young plants and in stubs, where it makes small tunnels. Heavy losses of stand in stubble cane have resulted from the feeding of this larva. The only remedial measure known is the planting of vigorous varieties of cane that will give a good stand as stubble in spite of weevil injury. No stages of these weevils have been found to survive soaking in water at a temperature of 122° F. for 30 minutes.

The Fall Armyworm[5]

The larval stage of the fall armyworn is grayish with three whitish longitudinal bands and with a blackish head. It is about 1 5/8 inches long when full grown.

This worn appears at times on small cane in the spring and in the late summer or early fall in newly planted cane. It may eat most of the foliage on the young sugarcane plants. Usually only one generation attacks the plants in injurious numbers, and often by the time injury is noticed most of the larvae have reached full growth. It is then too late to apply control measures. In fact, most chemical control has proved unsatisfactory. B. A. App (2) found that on corn in Puerto Rico lead arsenate and talc (1 to 9) gave the best results, with control ranging from 70.6 to 88.2 percent. Plowing to attract birds to the infested area has proved beneficial.

In southern Florida a worm[6] quite similar to the fall armyworn in habits and character of injury occurs in injurious numbers. It is a more serious pest of sugarcane in that area than the fall armyworm. Statements on the control of the fall armyworm also apply to this species.

The Lesser Cornstalk Borer[7]

This active, very slender caterpillar is greenish marked with dark-brownish bands. It is found throughout the sugarcane-growing area, where it bores into sugarcane plant just above and beneath the surface of the soil, causing the growing point to die. It is most easily recognized by its silken tubular runway connected with its entrance hole at the base of the injured plant and by the "flouncing" activity of the larvae when captured. Usually enough of the basal portion of the plant remains uninjured for it to produce a new sucker. Although little loss in stand usually results, growth is delayed, and the sucrose content of the stalks is somewhat lowered.

No satisfactory control measure is known other than growing a vigorous variety that will sucker well and grow quickly if injured.

Wireworms[8]

Wireworms, which are slender, smooth, and wiry, bore into buds of planted cane and into the young plants below the surface of the ground. No satisfactory control for wireworms attacking sugarcane is known.

Termites[9]

Termites, or "white ants," have at times caused severe injury to small fields of cane planted on land recently cleared of timber. To prevent termite injury such land should be cleaned, as nearly as practicable, of pieces of dead stumps and other wood before the planting of the cane.

The West Indian Sugarcane Fulgorid[10]

In the United States this fulgorid has been only in Florida and southern Georgia. It lives on the underside of the leaves and is easily recognized by the cottony filament-like tail of the nymphs and by the presence of a seal of cottony material at the place where the egg is inserted in the cane leaf. A parasite, *Gonatopus* sp., the larva of which forms a prominent seedlike sac on the side of the fulgorid's abdomen, usually keeps it under control. No artifical control measure is known.

The West Indian Sugarcane Mite[11]

The West Indian sugarcane mite has been found in a small area in southern Florida. It makes gum-like encrustations on the barrel and leaf sheath of cane. It may be killed on seed cane by the hot-water treatment as described for the sugarane mealybug.

Miscellaneous Insects

Plant lice found on sugarcane are the corn leaf aphid, *Aphis maidis* Fitch, the rusty plum aphid, *Hysteroneura setariae* (Thos.), and the yellow sugarcane aphid, *Sipha flava* (Forbes). The first two of these are vectors of the mosaic disease of sugarcane. *Aphis maidis* is usually found in the central whorl of the plant, *Hysteroneura setariae* on the collar lobe, and *Sipha flava* on the undersides of the leaves. No satisfactory control of these aphids is known, but the mosaic disease is controlled by the use of resistant varieties.

The sharp-nosed grain leafhopper, *Draeculacephala portola* Ball, has been found by Abbott and Ingram (1) to transmit chlorotic streak disease. It is usually the most numerous of all sucking insects found on sugarcane with the exception of the sugarcane mealybug. No satisfactory control is known.

Damage from these miscellaneous insects is negligible except in the cases of those instrumental in the transfer of cane diseases.

Warning Against Moving Untreated Sugarcane From One State To Another

A number of the preceding pests now occur only in limited portions of the Gulf coast sugar-producing area, and are likely to be transferred to uninfested sections through indiscriminate transportation of sugarcane. Increased travel in recent years throughout the various States growing sugarcane and the discovery of pests new to some States make it desirable to issue a warning against the movement of cane from one area to another. There is great danger

of the unintentional transportation of these pests. No cane should be moved from one section to another without first consulting responsible Federal or State agencies. In most cases it will be necessary, before moving cane to new territory, to treat it to destroy any pests likely to be carried on or in it (4). Also, the presence of any new destructive pest found attacking sugarcane should be reported immediately to the State Entomologist.

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*Designated as leader in sugarcane insect control by the Committee on Coordination of Entomology with the War Effort of the American Association of Economic Entomologists and the Entomological Society of America. Mr. Ingram was assisted in the preparation of this paper by the following entomologists: E. K. Bynum, Bureau of Entomology and Plant Quarantine; A. L. Dugas and C. O. Eddy, Louisiana Agricultural Experiment Station; J. H. Girardeau, Georgia State Entomologist; Clay Lyle, Mississippi State Plant Board and State Agricultural Experiment Station; W. C. Nettles, South Carolina Agricultural Experiment Station; J. M. Robinson, Alabama State Agricultural Experiment Station; L. C. Scaramuzza, Fellsmere Sugar Producers' Association, Fellsmere, Fla.; F. L. Thomas, Texas Agricultural Experiment Station; J. R. Watson, Florida State Agricultural Experiment Station; and W. D. Wylie, United States Corporation, Clewiston, Florida.

[1] *Diatraea saccharalis* (F.).

[2] *Pseudococcus boninsis* (Kuwana).

[3] *Euetheola rugiceps* (Lec.).

[4] *Anacentrinus subnudus* Buch.

[5] *Laphygma frugiperda* (A and S.).

[6] *Cirphis latiuscula* (H.-S.).

[7] *Elasmopalpus lignosellus* (Zeller).

[8] Elateridae.

[9] Termitidae

[10] *Saccharosydne saccharivera* Westwood.

[11] *Tarsonemus bancrofti* Michael.

Every Home Garden is a Blow Against the Enemy

(By Bertha Lee Ferguson, Home Garden Specialist, L. S. U. Agricultural Extension Division)

Remember that, if you grow your own vegetables, you are releasing stock of commercially grown ones for other civilians and for the men in the armed services. If you think of your garden as playing a vital part in our war effort, you will be careful in your use of seed, careful in your cultivation, and careful in seeing that not one vegetable goes to waste.

Growing *your own* vegetables will not only help to relieve a potential shortage of foodgrowing food at the point of consumption but will relieve the pressure on the railroads and on the other methods of transportation.

As our armed forces expand, more food is required for them. As our battlefronts widen, we are being called upon to help feed not only the soldiers but the populations in the countries which they occupy. Recent reports from Africa emphasize the dire threat of famine which exists in all countries which have been under Axis domination. To insure a fair distribution of the existing stocks of food, many are being rationed, chief among these being canned, dried and frozen fruits and vegetables.

Last year 98 per cent of all farm families in Louisiana grew home gardens. Not all of these gardens were adequate in amounts and varieties of vegetables grown. Too much of the garden space was given over to weeds and grass instead of to successive plantings of vegetables to eat fresh, to dry and to can. The bugs got more than their fair share of the crops. Unfavorable weather conditions proved discouraging to some first-time gardeners.

This year farm families, and those city and town dwellers who have the necessary space and the necessary labor, must endeavor to manage their garden planning and cultivation with a high degree of efficiency so as not to waste seed, fertilizer and insecticides. Our gardens must be made to produce a variety of vegetables 12 months of the year.

Patriotic Louisianians must endeavor to grow all-season gardens. A great many "amateur" gardeners get the garden fever in the spring, plant more than they can easily care for, and then, when the hot weather comes, abandon their gardens to the weeds and the grass. In our climate, gardening can easily be a year-round undertaking.

Concentrate your gardening attention on the essential crops, those high in food value. These are tomatoes, green, leafy and yellow vegetables, Irish and sweet potatoes, dried beans, peas and edible soybeans. We should grow enough tomatoes to serve them fresh, canned or in juice once each day, for they provide vitamin C. Green, leafy and yellow vegetables are among our best sources of vitamin A and certain essential minerals. Potatoes are excellent energy foods and provide certain vitamins and minerals. Dried beans, peas and soybeans are good sources of protein, the body-building food, as well as of vitamins and minerals.

As you gardeners have no doubt already learned, garden seeds are scarce and expensive. Plan now to save all the seed you can for next year's planting. Follow recommendations for fumigation and storage after the seeds are saved.

Novice gardeners will do well to devote considerable time to "armchair planning" before they begin work. If they will write for our Agricultural Extension bulletin, "Louisiana's Garden Plan for a Family of Five," they will receive detailed instructions as to exactly what, when and how to plant. (Address letters to Agricultural Extension Service, University Station, Baton Rouge, La.)

When you have planted your garden, be sure to follow recommended practices for insect control. It won't help the war effort to feed an army of bugs!

Make good use of all the space in your garden. As fast as one crop is through, clear it away and put something else in its place. Be sure when you do this, though, that you do not follow crops subject to soil-borne diseases, such as tomatoes, Irish potatoes and eggplant with the same or a related crop. Plant these crops as far away from the other season's planting as space in the garden will permit.

Make your garden large enough to meet the needs of your family, but don't get it so big that it will become a burden to keep it clear of weeds and grass. If the main crop of potatoes and peas is grown in the field, one-fourth acre well used is adequate for a family garden.

Above all, don't let any of your vegetables go to waste! Use all you possibly can while they are fresh, then can, dry or store all the surplus. There are too many hungry people in the world today for us to be wasteful of a single pound of food.

NOTICE OF MEETING

There will be an important meeting of the CONTACT COMMITTEE, under the chairmanship of Mr. Steven C. Munson, on Wednesday February 17, 1943 at the Agricultural Auditorium of Louisiana State University. A detailed program of this meeting will be printed in the February 15th issue of the Sugar Bulletin.

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THE SUGAR BULLETIN

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Food Administration Set-Up

(By C. J. Bourg)

The plans of organization to set up the U. S. Food Administration under Secretary of Agriculture Claude Wickard have been developed and adopted slowly and carefully. It now appears safe to state that the organization is functioning on the basis intended for the duration of the war. There are those who claim that the Food Administration is being organized on a permanent basis but we prefer to think of it as a Government agency for the purposes of the national emergency.

There are two grand divisions, the Food Production Administration, with Clifford Townsend as Director, and the Food Distribution Administration with Roy Hendrickson as Director. In terms of sugar, it will take many actual situations to determine just where Sugar Production control ends and Sugar Distribution control begins.

The Associate Director for Production is J. B. Hutson, who is the Executive Officer for the Food Production Administrator. The announcement of the sugar beet program (referred to elsewhere in the Bulletin) suggests that the Commodity Credit Corporation will supervise the program in view of the fact that the Corporation is underwriting the financial arrangements. Mr. Hutson is the President of the Commodity Credit Corporation. A Sugar Section has been organized in the Commodity Credit Corporation with Earl Wilson as Chief. Mr. Wilson has been an officer of The National Sugar Refining Company in New York and for the past year has been in charge of the raw sugar allocations to refiners and other functions connected with the sugar program of WPB.

The Agricultural Adjustment Agency, Fred Wallace, Chief, will carry out provisions of farm production programs, which includes the field administration of the Sugar Act program through the State Agricultural Conservation Committee, and assist the Parish and State War Boards in carrying out their war activities.

The Sugar Branch, Joshua Bernhardt, Chief, will function under the Food Distribution Administration and will assist the Secretary of Agriculture in his determinations with respect to the conditional payments provided for in Title 3 of the Sugar Act. Thus, the unit which came into being in 1934 as the Sugar Section, later becoming the Sugar Division and the Sugar Agency, emerges as the Sugar Branch.

An Agricultural Labor Branch has been added to the Food Production Administration with the operating responsibility for the farm labor program placed under the charge of Major John O. Walker. The U. S. Employment Service's functions with respect to the recruiting and placing of farm labor have been transferred to the Agricultural Labor Branch. Through this centralization, it is hoped that the problems of obtaining sufficient labor for cultivating and harvesting the sugarcane crop will have been met, provided there still remain workers available for farm work after the industrial and military war needs have been satisfied.

THE
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Marcel J. Voorhies, Editor
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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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Draft Exemptions in the Louisiana Sugar Industry

(By Chas. A. Farwell, Chairman Educational Committee, American Sugar Cane League)

Due to the fact that many employers of labor on sugar plantations and in factories have reported that their labor is migrating to other essential war jobs because they were of the opinion that they would be given more favorable consideration by their Draft Boards if they worked in shipyards or industrial war production plants, a conference was called at Selective Service Headquarters in New Orleans to discuss this problem. There were present Brigadier General Raymond H. Fleming, State Director of Selective Service, Lt.-Colonel J. Lester White, State Occupational Adviser, and the writer.

After a thorough discussion of the problems which have come up relative to labor migration from sugar cane farms and factories, it was concluded that an essential worker in the sugar industry has as good a chance for deferment as an essential worker in a war production plant and furthermore, an essential worker on a sugar cane farm or factory has a better chance of deferment than if he were to be employed as a non-essential worker in a war production plant.

The writer was authorized by General Fleming and Colonel White to issue the following statement, which explains the application of Selective Service to this problem:—

As a result of the newspaper releases listing certain activities that have been declared non-essential by the War Manpower Commission, many employers have indicated to Louisiana Selective Service Headquarters much concern regarding their personnel.

In many instances officials have stated that their employees have become very apprehensive as to whether or not certain activities are considered essential. In checking the list many of the activities mentioned are found not to have been included.

While additional lists may be issued from time to time, there is no reason why employees should be concerned now unless the activity in which they are engaged has actually been listed as a non-deferable one.

One specific case that has been called to the attention of this Headquarters is that of the sugar industry. The sugar industry is definitely considered as "agriculture". Local Board Release 115, issued by National Selective Service Headquarters on March 16th, amended April 11th and July 15th, 1942, provides, in part as follows:

"In Class II-A shall be placed any registrant who is found to be a 'necessary man' in industry, business, employment, agricultural pursuit, governmental service, or any other service or endeavor, the maintenance of which is essential to the national health, safety or interest."

It further provides that:

"Now that we are at war, the phrase 'national health, safety, or interest' no longer includes mere convenience and comfort. Activities essential to the National health, safety, or interest are now limited to those activities, other than war production, which support the war effort. Activities supporting the war effort include those activities which provide food, clothing, shelter, health, safety, and any other requisites of our daily life."

It further provided that:

"In Class II-B shall be placed any registrant found to be a 'necessary man' in any industry, business, employment, agricultural pursuit, governmental service, or any other service or endeavor, the maintenance of which is necessary to the war production program.

It provides further that:

"With reference to such civilian activities, the phrase 'necessary to the war production program' now means the work of processing or producing ships, planes, tanks, guns and other machines, instruments, articles and materials directly used in the prosecution of the war."

Activities engaged in the war production program and activities supporting the war effort are of equal importance. Both Class II-A and Class II-B deferments are limited to a maximum six-months' period, subject to an additional deferment of six months, or any part thereof, if the employer convinces the Local Board, or the Board of Appeal (if an appeal is taken), or the President (if an appeal is permitted and is taken) that a reasonable but unsuccessful effort has been made during the period of deferment to secure or train a replacement.

Since the production of sugar, which includes the planting, cultivation and harvesting of sugar cane, processing and refining operations, is definitely an "essential" activity, there is no good reason whatsoever why those engaged therein should be apprehensive as to the possibility of securing a deferment, unless the particular individual is, for example, serving as a day laborer cleaning out ditches on a sugar cane plantation when, because of his skill as a machinist

he should be serving where his skill could be better utilized in the war effort.

The Selective Training and Service Act of 1940, as amended, provides as follows:

"No deferment from such training and service shall be made in the case of any individual except upon the basis of the status of such individual, and no such deferment shall be made of individuals by occupational groups, or of groups of individuals in any plant or institution."

From this it will be readily understood that, regardless of the importance of an activity, there is no assurance that each and every employee will be deferred from service in the armed forces. The fact that a man is working in a war plant does not mean that he will necessarily be deferred. In classifying registrants employed in "essential activities", Local Boards give full weight and consideration to the following:

(a) The training, qualification or skill required for the proper discharge of the duties involved in his occupation;
(b) The training, qualification or skill of the registrant to engage in his occupation; and
(c) The availability of persons with his qualification or skill or who can be trained to his qualification, to replace the registrant and the time in which such replacement can be made.

In conclusion, it may be said that a registrant now serving in the production of sugar will, if so employed at the time of classification or reclassification, be more favorably considered for a deferment than were he to have left such employment within recent months and be serving as a helper in a war production plant.

Appraisement of Labor Saving Machinery

Napoleonville, La.
January 26, 1943

Mr. F. Evans Farwell, Chairman,
Special Committee on Mechanical Harvesting,
Louisana Siugarcane Technologists Association,
1002 Whitney Building,
New Orleans, La.

Dear Sir:

Of late I have heard a fair amount of talk about the advantages the big sugarcane farms have had over the smaller farms because of their use of harvesting machines. I'm a small or medium size sugarcane farmer and have been in the game for many years. I, for one, thank God that the big farmers had the intestinal fortitude to try to make harvesting machines work. The biggest work was done on the machines when the Government was making us plow-up or otherwise destroy part of our crop each year, and it took plenty of courage, especially then, to spend money on machines that most people agreed "would never work."

Just what would have happened to us smaller farmers if the larger places had not risked their money on harvesters?

In the first place there just was not enough harvesting labor available this fall. As a rough guess, I'd say that normally 10,000 laborers come into the sugar district for the harvest. This year I doubt that 5,000 such laborers were available, in spite of all the trucks sent to Mississippi, etc. Now, suppose that there had been no harvesters, who would have gotten the labor that was available? In 90% of the cases it would have been the big places because of the better houses, trucks for transportation to and from work, proximity of stores, and better facilities. The net result would have been that the big places, due to their proportionately larger crop investment, would have bidded-up wage scales to a point where the smaller farmers could not compete.

The second phase would then have occurred: The laborers would have heard from labor scouts that Y farm was paying more than the wages they were receiving on X farm; so they would pack-up and go to Y farm only to hear that Z farm was paying a still higher wage rate, and so they would pack-up and move to Z farm where they would stay until word was out that A farm had raised its wage rates even higher—etc., etc. The result would have been that the laborers, instead of cutting cane, would have spent a good big part of their time en route from one job to another, so that what labor was actually available would only have worked about 2/3 of the time. We would have lost all or a big part of our crops.

I tell you, when I have seen the big farmers struggling with those harvesting machines, seen the machines broken-down, on fire, in the ditch or stuck in a low cut, I've felt like taking my hat off and thanking them for what they were really doing for us smaller farmers.

It makes me mad to see subversive interests trying to drive wedges between the mills, big farms, medium farms, and small farms. Each of these units has a definite and useful place in the production of sugar and they get along mighty well if allowed to work out problems among themselves.

If you hear talk of big farms "having an advantage" due to their use of harvesting machines, just remember that most of us smaller farmers know the truth and appreciate the swell job that the big places have done in making the limited supply of labor available to us.

(Signed) W. J. FOLEY.

Program for Contact Committee Meeting, February 17th Announced

The program for the meeting of the Contact Committee on February 17th at 10 A.M. in the Agricultural Auditorium of Louisiana State University will be as follows:

1. Comparative milling of average and trashy sugar cane by J. C. Etheredge.
2. Milling results with 1/8" vs. 1/2" grooving on last mill by J. C. Etheredge.
3. Climatic conditions affecting the sugar cane crop for 1942 by S. H. Smith.
4. Variety report by E. C. Simon.
5. Preliminary outfield fertilizer tests on sugar cane by C. B. Gouaux and R. K. Walker.
6. Summary of sugar cane borer control with Cryolite in 1942 by A. L. Dugas.
7. Field work of the Department of Plant Pathology by I. L. Forbes.
8. Field tests with hot water treatment for chlorotic streak by P. H. Dunckleman and C. W. Edgerton.
9. Preliminary report on the flame cultivator by H. T. Barr.

331060

Program to Assist Sugar Beet Growers in Meeting 1943 Goals

Secretary of Agriculture Claude R. Wickard Feb. 10, 1943 announced a program which is designed to assist sugar beet growers in meeting their 1943 production goals.

The program, to be implemented by contracts between Commodity Credit Corporation and sugar beet processors, will, without an increase in ceiling prices of sugar, assure growers of their 1943 crop an increase of $1.50 per ton over the price received for 1942 crop sugar beets of standard quality (16.5 percent sucrose). It is estimated that returns to growers from the 1942 crop will average about $9.25 to $9.50 per ton for average quality beets, and on this basis returns for the 1943 crop should average around $11 per ton.

Under the program, the Commodity Credit Corporation will offer through sugar processors to purchase sugar beets from farmers at about $1.50 per ton above the estimated levels applicable with respect to the 1942 crop for beets of average quality and in turn, sell such beets to processors on the basis of sugar prices prevailing during the last 6 months of 1942.

The program would provide that processors pay the Commodity Credit Corporation all market returns from the sale of sugar above the level used in computing the resale value of sugar beets to the processors. If the increase of such returns plus the amount at which the Commodity Credit Corporation sells the beets back to the processors exceeds the amount at which beets are purchased from farmers, the Commodity Credit Corporation will use such excess to make supplemental payments to processors. These supplemental payments would be based on the processor's proportionate share of all beet sugar produced from the 1943 crop, and would be divided equitably with beet growers.

Processors will be expected to maintain the usual arrangements with growers regarding financing seed, deliveries, labor procurements, field advice and other services.

1943 Sorgo for Molasses Program Out

The following letter is self explanatory.

UNITED STATES DEPARTMENT OF AGRICULTURE
Commodity Credit Corporation
Washington, D. C.

Feb. 6, 1943

Mr. Marcel J. Voorhies, General Manager
American Sugar Cane League
414 Whitney Building
New Orleans, Louisiana

Dear Mr. Voorhies:

Your letter of January 15, addressed to the Secretary of Agriculture, regarding the 1943 Sorgo for Molasses Program, has been referred to us for reply.

We have reviewed the reports of the Bureau of Agricultural Chemistry and Engineering and the Bureau of Plant Industry, and have conferred with representatives of the Food Production Administration, including the Southern Division, Agricultural Adjustment Agency, regarding the advisability of having a sorgo program in 1943. The basic considerations in our discussions have been (1) competition in land use, and (2) the immediate need for developing the sorgo crop for utilization as raw material for the production of industrial alcohol.

Competition in land use apparently limits the potential use of sorgo to a relatively subordinate position as a source of alcohol. We are informed by the Agricultural Adjustment Agency that of a total of 850,000 acres of cropland in the potential sorgo area, approximately 400,000 acres are now in corn, 230,000 acres in sugar cane, and 90,000 acres in cotton. The greater part of any expansion in sorgo acreage would necessarily have to be made at the expense of corn, and the limit of such diversion is placed at but little, if any, over 100,000 acres.

Although the 1942 yields could doubtless be increased considerably by a research program covering a certain period of time, the estimated cost to the Department of supporting this program in 1943 seems difficult to justify from the standpoint of probable war-time benefits. Partly for the reason that land-use problems apparently limit the expansion of sorgo production at present, and partly from a consideration of the time and cost factors, it is the decision of the Department to omit the Sorgo for Molasses Program for 1943.

Your interest and offer of participation are greatly appreciated.

Cordially yours,
(signed) MILTON S. BRIGGS
Assistant Director
General Crops Division

Varietal Factors for Calculating Yield of Sugar Per Ton of Cane

(*By George Arceneaux, Agronomist, Division of Sugar Plant Investigations, Bureau of Plant Industry, U. S. Department of Agriculture*

Louisiana growers now have at their disposal a very good assortment of sugarcane varieties, but the success to be achieved on individual plantations and by the industry as a whole, in a large measure, depends upon the care and judgment exercised in selecting suitable varieties to meet specific needs. Numerous data for making varietal yield comparisons are obtained yearly in connection with research studies and routine plantation activities. The practice of segregating cane yields and analytical data by varieties now followed on many plantations has contributed especially useful information during recent years. Thus a plantation manager now has a wealth of current information upon which to base his selection of varieties.

The yield of sugar per acre is unquestionably the most significant value to be derived from an analysis of varietal data. It is also the most difficult one to measure. Yields of cane per acre and analyses of crusher and normal juice can be determined with very satisfactory accuracy but the additional information required for determining the probable yield of sugar per ton of cane cannot be readily obtained on individual lots of cane. Therefore generalized factors are customarily used in calculating the yields of sugar per ton of cane from analyses of crusher or normal juice.

It is well recognized that sugarcane varieties now being grown commercially or experimentally in Louisiana differ widely among themselves with respect to fiber content and other qualities which will affect materially the yield of sugar per ton of cane at a given crusher or normal juice analysis. Through

methods developed at the Houma Station of U. S. Department of Agriculture[1] it is now possible to conduct accurate milling tests on relatively small quantities of cane. Results of such tests show that while normal juice extraction and other milling factors may vary greatly under different growing conditions with a given variety, any two varieties will tend to maintain a fairly constant relationship to each other with respect to such factors when grown under similar conditions. From the results of tests conducted during the past it is possible to separate the most important released and unreleased varieties into groups of more or less similar milling properties. By assuming a set of sugar extraction and recovery factors representative of the variety used as a standard (Co. 281), and by making appropriate adjustments in the case of varieties differing significantly from the standard in milling qualities, it is possible to arrive at sugar yield values for different varieties which will be reasonably accurate in a relative, if not in an absolute sense.

The following table gives factors by the use of which the probable yield of 96° sugar per ton of cane of each of 30 important varieties can be rapidly calculated from the Brix and percent sucrose of normal juice. A normal juice extraction of 76 percent and a boiling house efficiency number of 100, considered representative of efficient Louisiana factories, are assumed for Co. 281 and varieties of similar milling qualities. It is of course realized that under a different set of milling conditions, or under growing conditions tending to abnormally increase or decrease fiber content of the cane, actual recoveries would differ from the assumed, but the varietal relationships which is the important consideration would not be changed materially.

Table showing factors for calculating indicated yield of 96° sugar per ton of cane from Brix and percent sucrose in normal juice for each of 8 varietal groups. [1]Normal Juice extraction 76%, B. H. E. number 100 assumed for Co. 281 and other varieties of Group 5.

Group Number	Varieties[2]	Factors[3]		Indicated yield of 96° sugar per ton of cane testing as follows: Brix 15.00—Sucrose 12.00%
		Brix	% Sucrose	
1	33/409	5.827	20.393	157.3
2	33/372 33/54 33/53	5.953	20.837	160.7
3	*28/11 34/92 *28/19 34/21	6.080	21.280	164.2
4	*807 *33/243 *29/320 33/253 31/509 *34/120 31/529 36/191	6.207	21.723	167.6
5	*(Co. 281) Standard *29/120 34/75 33/224 34/86	6.333	22.167	171.0
6	*29/103 29/137	6.460	22.610	174.4
7	*29/116 34/115 32/206 34/139 34/80	6.587	23.053	177.8
8	*Co. 290 29/99	6.713	23.497	181.3

[1] Grouped on basis of varietal milling factors ranging from 0.92 to 1.06 as determined from results of experimental studies of percentage of fiber and milling qualities.
[2] C. P. Varieties except where otherwise indicated.
[3] Illustration: Normal juice Brix, 15.00, Sucrose 12.00% (20.393 × 12) minus (5.827 × 15)=157.3.
* Varieties released for commercial culture. Others are under experimental test.

The method of calculating varietal factors given in the table has been described in a previous publication.[2] An illustration of their application is given at the foot of the table. As can be readily seen, the use of such factors will greatly facilitate routine calculations. Where a calculating machine is available the two steps can be combined in a single operation by first multiplying the sucrose factor by the percent sucrose value and leaving the product in the machine. The product of Brix factor x Brix can then be subtracted from the first product by placing the Brix factor in the machine as a multiplicand and multiplying by the Brix value using the minus bar.

The differences in calculated yield of sugar per ton of cane between varieties of different millability groups at the same normal juice analysis emphasizes the extreme importance of recognizing varietal differences in making sugar yield comparisons. Failure to do so incurs risk of establishing false standards of value in arriving at varietal preferences. The large and varied assortment of varieties now available can be an immense asset in permitting a more advantageous use of all categories of soils and growing conditions. But by the same token the dangers of making an inappropriate selection are correspondingly great. It is important at all times to take into consideration any factor which might affect varietal comparisons but it is especially important at this time to make a critically discriminate use of varieties in the interest of a maximum contribution toward the war effort by the industry.

[1]Arceneaux, G., Krumbhaar, C. C., and Bisland, R. B. Testing cane to determine probable milling yield. Facts about Sugar. 28:350-353. 1933

[2]Arceneaux, G. A simplified method of making theoretical sugar yield calculations. Int. Sug. Jour., pp. 264-265. 1935.

Food Distribution Administration Organized for War Jobs

Completion of the organization of the Food Distribution Administration for its wartime functions was announced by the Department of Agriculture. This follows the final determination by the Bureau of the Budget and an Inter-agency Committee of the specific personnel and functions transferred from the War Production Board to the Department of Agriculture under the President's order transferring authority over food production and distribution to Secretary Wickard.

The Secretary approved the organization recommended by Roy F. Hendrickson, Director of the Food Distribution Administration, in which the Agricultural Marketing Administration, the Food Division and other food units of the War Production Board, the Sugar Agency of the Agricultural Conservation and Adjustment Administration, and units of both the Office of Agricultural War Relations and the Bureau of Animal Indusutry are merged.

Nine commodtiy branches functioning under the general direction of Mr. Kitchen have been established. They will have, with respect to the commodities assigned to them, responsibility for initiating and carrying out programs dealing with wartime food problems, including regulatory work, distribution economics, purchase and price support. The nine commodity branches and their chiefs are: Fruit and Vegetable Branch, W. G. Meal; Fats and Oils Branch, T. L. Daniels; Dairy and Poultry Branch, T. G. Stitts; Grain Products Branch, E. J. Murphy; Livestock and Meats Branch, Harry E. Reed; Special Commodities Branch, H. C. Albin; Sugar Branch, Joshua Bernhardt; Tobacco Branch Charles E. Gage; Cotton and Fiber Branch, Carl E. Robinson. Mr. Daniels has been head of the Fats and Oils Section of WPB's Chemical Division, and Mr. Bernhardt has headed the Sugar Agency of ACAA. The other commodity branch chiefs held similar positions in the Agricultural Marketing Administration.

Farm Labor

(*Department of Agriculture in Charge of Farm-Labor Manpower*)

Unified responsibility for supplying labor for war production on farms was given to Secretary of Agriculture Claude R. Wickard on January 25, 1943 under a directive issued by Paul V. McNutt, Chairman of the War Manpower Commission.

The directive consolidates functions previously divided between the United States Employment Service and Department of Agriculture. Operating responsibility for recruiting and placing farm labor, the determination of needs and of areas of supply, the transportation of farm workers to shortage areas, and the determination of war-essential crops are brought together in the Department of Agriculture. Under a previous directive from Economics Stabilization Director James F. Byrnes, the Department also has responsibility for dealing with farm wages.

The War Manpower Commission continues control of over-all manpower policies and standards, including those affecting agriculture, and will continue to determine *Selective Service standards* applying to agriculture. It will be responsible, also, for "continuous review and appraisal of the agricultural labor program."

Manpower Chairman McNutt's action in placing upon the Department of Agriculture responsibility for handling farm labor needs was taken under the authority granted in the President's Executive Order of December 5. The order authorized the Chairman to "avail himself of the services and facilities of such Executive Departments and agencies as he determines may be of assistance in carrying out the provisions of this Order." The order also provided that departments and agencies were to utilize their "facilities, services and personnel and take such action" as the Chairman of the War Manpower Commission determines to be necessary to promote compliance with the provisions of the Executive Order.

The Department of Agriculture's responsibilities relate to all labor concerned with or incident to regular farming operations but *do not* include labor for manufacturing or commercial operations, such as processing, packing, canning, transporting, and marketing farm products.

The Department will handle all operating functions for the importation of farm workers from outside the country, subject to policies of the War Manpower Commission and will mobilize and direct the use of local supplies of labor for agriculture including women and young people.

Operating responsibility for the farm labor program will be centralized in the Agricultural Labor Branch of the Department's Food Production Administration. Secretary Wickard announced. Major John O. Walker is in charge of this division; in this capacity he will also serve on the staff of the Bureau of Placement of the War Manpower Commission.

Secretary Wickard said details on the machinery to be used in carrying out the new farm labor responsibilities would be announced shortly.

Cane Blackstrap and Beet Sugar Molasses Price Differentials

Established differentials from tank car prices for each type of cane blackstrap and beet sugar final molasses must be maintained for sales in quantities of less than a tank car, the Office of Price Administration said.

Specific provision that each seller shall maintain the differentials in effect from August 1, 1941, to March 31, 1942, for each type of molasses as well as for each type and size of container on sales to the same class of purchaser is contained in Amendment No. 90 to Supplementary Regulation No. 14 under the General Maximum Price Regulation. The amendment is effective January 25.

(Document No. 9889)

Part 1499—Commodities and Services

Cane Blackstrap and Beet Sugar Molasses

A statement of the considerations involved in the issuance of this amendment has been issued simultaneously herewith and filed with the Division of the Federal Register.

Inferior subdivision (b) of § 1499.73 (a) (43) (i) is amended as set forth below:

§ 1499.73 *Modification of maximum prices established by § 1499.2 of General Maximum Price Regulation for certain commodities, services and transactions.* (a) * * *

(43) *Cane blackstrap molases and beet sugar molasses.* * * *

(i) * * *

(b) The maximum prices set forth in inferior subdivision (a) shall be adjusted by the addition or subtraction, as the case may be, of a differential, if any, for sales in less than tank car lots. If during the period August 1, 1941 to March 31, 1942 (1) the seller customarily charged a differential over his tank car price for such sales, he may add to the applicable maximum f. o. b. tank car price set forth in inferior subdivision (a) an amount not higher than the highest differential charged by him during said period for the same type of molasses packed in the same type and size of container to a purchaser of the same class; or (2) the seller customarily deducted a differential for such sales from his tank car price, he shall deduct from the applicable maximum f. o. b. tank car price set forth in inferior subdivision (a) an amount not less than the lowest differential charged by him during said period for the same type of molasses packed in the same type and size of container to a purchaser of the same class.

Within 30 days from the effective date hereof, each producer of cane blackstrap molasses and beet sugar final molasses produced in the continental United States and each distributor thereof other than those persons exempted in subdivision (ii) shall file with the Office of Price Administration, Washington, D. C., a complete list of his differentials over and under his tank car price, specifying the type of molasses, the type and size of container and class of purchaser to which each applies.

(b) *Effective dates.* * * *

(91) Amendment No. 90 (§ 1499.73 (a) (43) (i) (b)) to Supplementary Regulation No. 14 shall become effective January 25, 1943.

(Pub. Laws 421 and 729, 77th Cong.; E.O. 9250, 7 F.R. 7871)

Issued this 19th day of January 1943.

Administrator.

More Steel for Farm Machinery

The Requirements Committee of WPB authorized on January 21st a substantial increase in the tonnage of steel to be delivered during the first quarter of this year for the manufacture of the various types of farm machinery included in the Department of Agriculture's program.

Allotment of an additional 50,000 tons of Bessemer steel authorized today raises the total for farm machinery from 137,000 tons to 187,000 tons—an increase in tonnage of approximately 30 percent for the first quarter.

The farm machinery program for the second quarter will be acted on at the same time all other programs for the second quarter are reviewed early next month.

The tonnage allotted is *in addition* to the increase authorized a week earlier in the program covering production of repair parts for farm machinery. Under the latter increase, repair parts can be produced at a rate of 167 percent of the 1940 production as requested by the Department of Agriculture.

Top priority of AA-1 is assigned to delivery of the steel involved.

What Price Ceilings Mean to the Consumer

(*Office of War Information, Office of Price Administration*)

Ceilings on the prices of food, clothing, rents in critical war areas, and other cost-of-living items saved the nation's consumers around $6,000,000,000 through the end of 1942, the Office of Price Administration announced today.

In other words, if prices had been permitted to follow the inflationary pattern of World War I in 1914-1918, the nation's outlay for cost-of-living needs would have been that much higher.

For 1943 alone, if present prices are maintained, savings to Mr. and Mrs. Average American in living costs will be $17,000,000,000.

Translated into pocketbook figures, the savings through the end of 1942 averaged nearly $140 per family. For 1943 alone if present prices are held, savings will be $400 per family.

This is the stake that American consumers have in price control this year.

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Vol. 21 NEW ORLEANS, LA., MARCH 1, 1943 No. 11

U. S. Sugar Supply Outlook Alarming

(*By Ody H. Lamborn, Lamborn & Co., Inc.*)

As students of the sugar situation, we daily grow more apprehensive about the sugar supply prospects for 1943. The situation is rapidly approaching the danger point.

Here we are well into February and yet, up to this writing, no contract agreement has been developed for the production of sugar beets. True, the government, beet growers and beet processors have been in meeting for weeks, but no satisfactory program has been forthcoming. *Valuable time* is being lost, which will affect materially the size of the 1943 U. S. sugar beet crop.

The difficulty seems to lie in the fact that whereas the farmers received on the average $9.50 per ton in 1943 for sugar beets they, because of higher costs all along the line including labor, are now asking $12.00 per ton of beets. For them to secure this amount, either one of two things must happen—an increase in the ceiling price of sugar enabling the farmer to get a higher return, or new "incentive" subsidies that will bring the results to the farmers up to their desired figure. The government has not as yet, as we understand it, been able, or is not yet convinced that it is necessary, to work out a program which would place sugar beets *in a competitive position with certain other farm products* and warrant the farmers' growing beets.

As an example of the time and production being lost—normally in California beet acreage is contracted for in December and by this time 40% of the crop has been planted. This year, to date, the contracts have not been written and only a fraction of the usual acreage has been planted to sugar beets. In the Rocky Mountain and Eastern beet areas there should have been formulated ere this a satisfactory contract under which the farmers and beet processors working in cooperation could line up and *make plans* for beet sugar production during the coming campaign.

Of great importance in beet production is the fact that since *farmers plan their year's production* much in advance and have already received the government programs on other commodities such as beans, tomatoes, potatoes, etc., acreage that would normally go into sugar beets is *already being switched* to other crops. Two things that cannot be left until the last minute are the *planning for sugar beet production* and the *planting of sugar beets*. Every day's delay in the accomplishment of a final contract under which beet farmers and beet processors may operate with the approval of the government means valuable and needed sugar *production lost forever*—at a time when sugar production is essential as never before in our country's history. Obviously, *quick, decisive action is imperative*. Without it, the current meagre household ration may be threatened; home canning and preserving—the results of conscientious home workers' efforts—may be materially reduced, and commercial sugar allotments for those making vital food products, i.e., bread, cakes, candies, etc., may be substantially curtailed.

Also we should add here that in view of the scarcity of farm labor at the present time it is most unfortunate that the sugar beet program is not progressing simultaneously with the crop programs on beans, potatoes, tomatoes, etc., since it is well known that the most efficient use of labor in beet areas is attained

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by the laborer's dividing his time amongst these several crops. In other words, when beets are not grown where they are normally grown, much valuable time of the laborer will be lost, which otherwise would naturally be utilized.

In view of the conditions described, it is our considered opinion that this year we may witness the production of one of the *smallest* beet sugar crops in years. In fact, it is quite possible that beet sugar production may be shockingly low. The beet industry in its most auspicious days never produced more than 1,775,000 short tons refined sugar. The ten year average production of the beet industry is 1,450,000 tons. During those years there was no serious labor problem. And sugar beets *were not up against* other "incentive crops" generally.

If we add to the deplorable situation described above the probability that Lend-Lease will *siphon off* from this country during the current year a tremendous quantity of sugar, if no concerted effort is made to move more sugar into the United States from offshore areas than was imported in 1942, and if we add the probability that we will have a smaller production this year in the domestic cane fields because of labor difficulties and competition of other crops, it does not take much perspicacity, imagination or understanding to realize that the 1943 sugar supply situation will be drastically cut as compared with 1942. It is for this reason that we repeat that *positive, decisive, and quick action must be taken on the entire sugar program.*

In 1942, there was an amazing crop of those who professed to believe, and publicized the fact that sugar is not an essential food. They led the public to believe that sugar is a frill and a furbelow, that it is a luxury, that it is merely something that pleases the palate. They went contrary to *the facts* that standard fine granulated sugar is one of the purest foods on the market, inasmuch as its sucrose content approximates 100%; that as a food it provides a high energy value per unit of weight; that it is one of the cheapest foods on the market.

Their lack of knowledge cost the United States public millions of dollars in 1942 in lost fruits and vegetables—the produce of farms and orchards that went to *waste and rot,* because there were not at the time of harvesting completely adequate sugar supplies to enable the housewife to do her usual preserving and canning. Their lack of knowledge has since been evidenced by a press report to the effect that Secretary Wickard's Food Distribution Administration has met with members of the National Confectioners Association to work out a program for the diverting of a larger amount of the already curtailed civilian candy supplies to workers in essential industries. The press report further states that "in accordance with suggestions of government officials, wholesalers and jobbers are being requested to divert a still larger portion of their limited supply to war plant workers. Under this informal priority arrangement, candy would be allotted about like this: Armed forces, Lend-Lease, defense workers, other civilians."

Government officials, through the press and the radio, are exhorting the public to create Victory gardens this year—to can and preserve foods as never before in order to offset as much as possible the reduction in the food supplies from normal sources available to the civilian population because of the diversion of tremendous quantities of the commercial pack to the Army, the Navy, and Lend-Lease. President Roosevelt, in his statement of January 12th to the nation's farmers said, "Food is a weapon in total war—fully as important in its way as guns or planes or tanks . . . We of the United Nations also are using foods as a weapon to keep our fighting men fit and to maintain the health of our civilian families." Secretary Wickard has said, "Food production is war production". The perfect twins in any food conservation plan are *fruit and sugar, vegetables and sugar,* and one is as important as the other, since in the preservation of these foods, sugar is indispensable.

Certain departments of the government, in their effort to cooperate with the public in the matter of Victory gardens, canning, and preserving, etc., are taking steps to assist in this great campaign. For example, according to recent press dispatches, "The War Production Board is preparing to give full cooperation to families who want to escape the limitations of point rationing of canned goods by preserving their own food this Summer when there is expected to be an abundance of fresh fruit and vegetables. Two orders relating to home canning are now before the WPB and are expected to be approved soon. One would permit a very substantial increase in the manufacture of pressure cookers of the type used for home canning and the second would permit an equally substantial rise in the manufacture of 'closures'—the metal tops or clamps used on preserving jars."

Also in the same article, the statement is made, *"Increasing the volume of home canning, advocates*

of the orders have contended, will bring other substantial economies in critical materials. It will reduce the amount of wasted or spoiled local produce, ease the strain on transportation facilities, make more of the commercial pack available for military and Lend-Lease use and increase the food supplies available for civilian use next Winter."

Is it not futile to talk on the one hand about the growing of greater food crops and on the other hand *not* to provide *amply* for a supply of sugar necessary to can and preserve the resulting produce?

It is fervently to be hoped that the sugar supply situation in the United States will not be handled in such a fashion that next May or June when the canning and preserving season will be in full blast, an "emergency" will have been permitted to develop whereby, in order to provide sugar for preserving and canning, it will be found necessary to reduce either the household ration or the institutional and industrial allotments. This would be robbing Peter to pay Paul. It would be not only unnecessary but manifestly a disservice to the public as a whole. Furthermore, such foods as may be available for the home front will require more sugar to make them palatable.

"Incentive" payments to farmers for extra production of certain foods have already been announced—*but not for sugar.* As a vital food needed by the Army, our allies, and last, but by no means least, by the home front, there is no reason why sugar should take second, third, or fourth place in relation to other food commodities, especially at a time when farm labor costs are high. Naturally, the farmer is going to grow that product for which he receives the greatest reward.

Since sugar today is one of the cheapest food commodities on the market *from any standpoint,* if not the cheapest, and since it has tremendous value to the public in producing energy, it is our opinion that no policy should prevail which *discourages* the production of sugar. If an advance in the price of sugar to the consumer is necessary to make it possible to secure the proper amount of sugar production, then let's have it.

LET'S BE QUICK AND DECISIVE ABOUT IT BEFORE IT IS TOO LATE!

Farm Machinery

(*Office of War Information, War Production Board*)

The following statement has been issued by Chairman Donald M. Nelson, of the War Production Board:

"I have read the report issued by the Truman Committee in regard to the necessity for increased production of farm machinery. With the conclusion that there should be such an increase I thoroughly agree; but to avoid the possibility of any misunderstanding of the policy which has been followed in the War Production Board, I should like to stress a few points.

"First of all, after full consideration of all of the facts—our needs in respect to food supply, and the claims which other parts of the war program make upon our stocks of critical materials—the Office of Civilian Supply in June drafted for the farm equipment industry a program which was sound in the light of the need for offensive weapons then prevailing. Conditions since have changed, as they so frequently do in wartime, and the program should be and is being enlarged; but I do not think it is fair to criticize the Office of Civilian Supply for not having acted in June in the light of a situation which did not develop until long after the 1943 farm equipment program was formulated.

"Secondly, an examination of the facts will show clearly that the War Production Board has given continuous and careful study to the needs of our food producers in regard to mechanical equipment. In October, at the insistence of the Office of Civilian Supply, the quantity of steel alloted to the farm equipment industry was increased from 120,000 tons to 178,000 tons for the fourth quarter; subsequently, and again at the insistence of the Office of Civilian Supply, the industry was given a AA-1 rating, equal to the highest military priority. Still later, the production of repair parts was increased; and today the WPB Requirements Committee increased the tonnage by an increase of approximately 30 percent for the first quarter.

"The Office of Civilian Supply is charged with a unique and indispensable function in the war program. It bears the responsibility for planning the adjustment of the civilian economy to war conditions; hence it must both curtail the less necessary and preserve the essential. In filling this role it has taken the lead in stopping the production of various kinds of consumers goods—such as automobiles and mechanical refrigerators—and in reducing the production of many others, such as stoves. But it has also been foremost in pressing for adequate preference ratings for the maintenance of the civilian economy, and in such matters as the allocation of textiles for basic uses like the manufacture of work clothing.

"In a war program of this size and urgency, many actions must be made with great speed. Some of them will occasionally err on the side of cutting down too much, where the civilian economy is concerned; some of them will at times be too generous. But I believe that there is surpassing need for the continued operation of the Office of Civilian Supply, which weighs comparative urgencies of the pressing claims of the different parts of the civilian economy and strives to maintain what is essential and only that.

"I should like to point out, furthermore, that in ponsoring a concentration program for the farm equipment industry the Office of Civilian Supply was carrying out what we believe to be a mandate of Congress. In the Smaller War Plants Bill, passed unanimously by both Houses of Congress on June 11, 1942, Congress directed the Chairman of the War Production Board to cooperate with the Director of Civilian Supply so that, in the issuance of orders limiting production by business enterprises, small business concerns could be more efficiently and effectively used in production both for war and for essential civilian goods."

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1943 Sugarcane Crop Farming Practices

Title 7—Agriculture

Chapter VIII—Food Distribution Administration[1]

Part 802—Sugar Determinations

Determination of farming practices to be carried out in connection with the production of the 1943 crop of sugarcane in the mainland cane sugar area, pursuant to section 301 (e) of the Sugar Act of 1937, as amended.

Pursuant to the provisions of section 301 (e) of the Sugar Act of 1937, as amended, the following determination is hereby issued:

§ 802.23e *Farming practices in connection with the production of the 1943 crop of sugarcane in the mainland cane sugar area*—(a) *Soil-building requirements.* The conditions prescribed in subsection (e) of section 301 of the Sugar Act of 1937, as amended, shall be deemed to have been fulfilled with respect to the production of the 1943 crop of sugarcane for sugar on any farm in the mainland cane sugar area if there is carried out in 1943, on land on the farm which is adapted to the production of sugarcane for sugar, an acreage of soil-building practices equal to not less than 15 per centum of the acreage of sugarcane for sugar growing on the farm for harvest in 1943.

(b) *Approved practices.* (1) Each acre of the following shall be counted as one acre of soil-building practices:

(i) Seeding winter legumes.

(ii) Plowing or disking under a good stand and good growth of a green manure crop, or cover crop (excluding lespedeza, peanuts hogged off, and non-leguminous cover crops).

(iii) Turning under a good stand and good growth of summer legumes (excluding peanuts, lespedeza, and summer legumes used as truck crops) nut interplanted or grown in combination with row crops such as corn.

(2) Each two acres of the following shall be counted as one acre of soil-building practices:

(i) Turning under a good stand and good growth of summer legumes (excluding peanuts, lespedeza, and summer legumes used as truck crops) interplanted or grown in combination with row crops, such as corn: *Provided,* The summer legume occupies at least one-third of the land.

(3) Each of the following practices in the amounts specified shall be counted as one acre of soil-building practices if applied to a full seeding of winter legumes:

(i) Application of 300 pounds of 16-percent superphosphate (or its equivalent) to, or in connection with the seeding of winter legumes.

(ii) Application of 500 pounds of basic slag or rock phosphate (including Colloidal Phosphate) to, or in connection with the seeding of, winter legumes.

(4) Each one and one-half acres of land the top soil of which is combustible (determined as such by the State Agricultural Conservation Committee) and from which no crop classified as soil-depleting in ACP-1941, 1941 Agricultural Conservation Program Bulletin, as amended, is harvested in 1943 and on which adequate facilities (ditches, pumps and necessary equipment) have been maintained (whether constructed in 1943 or earlier) for flooding the land during the 1943 fire hazard season as a protection against the destruction of such top soil by fire and on which there are carried out the practices specified in paragraphs B, C, D and E of Amendment 3 to Southern Region Bulletin 101, issued June 11, 1937, for protecting the soil against fire, assuring adequate drainage, and preventing soil oxidation and subsidence, shall be counted as one acre of soil-building practices: *Provided, however,* That there shall be carried out on such land on the farm such other practices as are recommended for the farm by the County Agricultural Conservation Committee, and approved by the State Agricultural Conservation Committee, for protecting the soil against fire, assuring adequate drainage, preventing soil oxidation and subsidence, and otherwise preserving and improving the fertility of the soil and preventing soil erosion, such practices to be consistent with reasonable standards of the farming community in which the land is located.

(c) *Standards of performance.* The soil conserving practices shall be carried out on the farm in accordance with farming methods commonly used in the community in which the farm is located and in accordance with specifications approved by the Director of the Southern Division of the Agricultural Adjustment Agency.

(Sec. 301, 50 Stat. 910; 7 U.S.C., 1940 ed. 1131)

Done at Washington, D. C., this 1st day of February, 1943. Witness my hand and seal of the Department of Agriculture.

(SEAL) GROVER B. HILL,
Assistant Secretary.

(F.R. Doc. 43-1746; Filed, February 2, 1943; 11:17 a.m.)

[1]Formerly Sugar Branch.

Recommendations for the Control of the Sugarcane Borer in Louisiana in 1943 by Dusting with Cryolite

The following recommendations are made for insecticidal control of the sugarcane borer (*Diatraea saccharalis* (F.)) in Louisiana in 1943.* They are based on extensive cooperative investigations conducted since 1937. Either the first or second generation of borers may be controlled successfully by dusting with cryolite, although seldom should it be necessary to dust the same field for both generations.

First-Generation Control

First-generation borers are those hatching from eggs laid by moths that have come from overwintered larvae. They begin to appear in large numbers about April 15-30, at which time dusting should be begun. First-generation dusting is recommended for borer control over an entire plantation, on heavily infested areas from which there may be a substantial spread of borer moths into adjoining areas, and on smaller areas with a localized infestation. First-generation dusting is a waste of effort in a small part of a large infested area, because of the possibility of reinfestation from the nearby untreated cane.

The following points are important for successful control:

1. Dust four times at weekly intervals, beginning with the first hatching of young borers.
2. Apply dust at the rate of about 8 pounds per acre per application, while the air is quiet and the plants are wet with dew, which is usually between about 6 p.m. and 9 a.m.

3. Use a power dusting machine for treating large areas, but rotary hand guns may be used in small areas.
4. Use two nozzles to the row, especially in cane of a heavy stand. Good control has been obtained, however, with one nozzle per row.

The estimated cost of dusting first-generation borers from the ground with power dusting machines is $5.50 per acre, and with hand guns somewhat higher. In first-generation dusting, about 10 acres can be treated per hour with a 3-row ground dusting machine and about 15 acres per hour with a 5-row machine. One man with a hand dust gun can dust about 1 acre per hour.

Second Generation Control

Second-generation borers begin to appear about June 10 to 25. Dusting to control the second generation is recommended for fields not previously dusted, or for small areas where there is danger of reinfestation from adjacent untreated cane. The important points to be observed are as follows:

1. As in the previous case, dust four times at weekly intervals, beginning with the first hatching of second-generation borers.
2. Apply the dust between 6 p.m. and 9 a.m. at the rate of about 10 pounds per acre per application.
3. Use rotary hand gun, or a power dusting machine built up high enough to avoid breaking the cane. Large-scale dusting may be done by airplane if proper ground equipment is not available.

The cost of dusting the second generation is slightly more than that for the first generation and the time required for making an application is somewhat longer.

*These recommendations were prepared jointly by the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture and the Louisiana Agricultural Experiment Station.

Tank Car Control

(*Office of War Information, War Production Board*)

A new series of orders covering transportation, the first one designed to eliminate excessive hauling and transportation of less essential materials, was inaugurated by the War Production Board recently with issuance by the Director General for Operations of General Transportation Order T-1.

While Order T-1 relates only to steel tank cars and steel tank trucks, it sets up the framework by which any type of shipment can be regulated as the need may arise.

Purpose of the order, in its present form, it was explained by Dr. W. Y. Elliott, Director, Stockpiling and Transportation Division, WPB, is to control the use of tank cars for all shipments except petroleum and petroleum products because of the critical shortage of tank cars in the nation.

Three types of controls are set up by Lists I, II, and III attached to the order.

List I materials are zoned. Shipments may not be made beyond the prescribed areas without special authorization of the Director General for Operations. Applications for authorization are to be made on Form PD-782, or by telegram in an emergency. The only materials on List I at present are molasses and caustic soda.

Shipments of molasses of 200 miles or more, except for the manufacture of yeast and citric acid, are prohibited after March 1st. Purpose of this control over molasses is not to reduce shipments primarily, but to bring about a more orderly movement of tank cars carrying it. Separate applications will have to be made for each shipment of more than 200 miles, however.

Controls over shipments of caustic soda become effective on April 1st. (*Reference to caustic soda omitted.*)

List III materials are exempt from control unless they also appear in List I or List II, in which case they are subject to the restrictions governing these lists. For example, while alcohols are a List III material and are exempt from control, shipments of ethyl alcohol, a List II material, are therefore not exempt, except that owned or shipped by the Defense Supplies Corporation.

Any material which does not appear on List I, II, or III, may not be shipped by tank car after March 1st without special authorization, unless consigned to the Army or Navy or for lend-lease. Proof of authorization must be shown by the shipper before cars will be assigned by the Office of Defense Transportation. The purpose of this provision is to prevent shipment of materials in tank cars where other means of transportation are available, or where the shipment is not essential to the war program. Shipment by tank truck of materials not listed in the order is not affected.

T-1 applies only to shippers and not to carriers, bringing the order under the control of WPB, which has authority over distribution of materials, rather than the Office of Defense Transportation, which regulates the use of the railway and highway systems. Where ODT permits are required, they will be appended to permits required under the order, as a matter of convenience to the shipper.

The order applies only to shipments originating in the United States. It does not control imports, which are governed by General Imports Order M-63.

While the Chemicals Division is the one mainly concerned in the original order because the materials under the control of the War Production Board which move in tank cars come mainly under the Division, the Food Administrator is expected to add other materials to the order.

(General Transportation Order T-1)
Part 3157—Controlled Shipments

The fulfillment of requirements for the defense of the United States has created a shortage in the supply of transportation facilities and of certain materials for defense, for private account and for export; and the following order is deemed necessary and appropriate in the public interest and to promote the national defense:

§ 3157.1 *General Transportation Order T-1*—(a) *Definitions.* For the purpose of this order:

(1) "Controlled shipment" means shipment, including reconsignment, of any material on List 1 or 2 annexed hereto, where the shipment is to be made at the time, in the manner and for the distance specified opposite such material in such list.

(2) "Originate" means to load for shipment or to tender or offer to a carrier for shipment.

(3) "Tank car" means any railway tank car having one or more steel tanks from which materials are customarily loaded and unloaded while the tank is on the car.

(4) "Tank truck" means any vehicle designed for highway travel having one or more steel tanks from

which materials are customarily loaded and unloaded while the tank is on the truck.

(b) *List 1 materials.*—(1) No person shall originate a controlled shipment of any List 1 material, except as specifically authorized or directed by the Director General for Operations.

(2) Any person seeking authorization to originate a controlled shipment of any List 1 material may make application on Form PD-782, or, in emergency, by telegram, containing substantially the information called for by such form.

(c) *List 2 materials.*—(1) Each person shall report on Form PD-782 on or before the 20th day of each calendar month all shipments of List 2 materials which he then intends to originate during the succeeding calendar month.

(2) Each person shall report on Form PD-782 on or before the 10th day prior to origination any controlled shipment of List 2 materials which he then intends to originate and has not previously reported.

(3) Any person may originate a controlled shipment of List 2 materials reported pursuant to paragraph (c) (1) or (2), unless otherwise specifically directed by the Director General for Operations.

(4) No person shall originate a controlled shipment of any List 2 material which has not been reported pursuant to paragraph (c) (1) or (2), except as specifically directed or authorized by the Director General for Operations. Applications for such authorization may be made by telegram containing substantially the information called for by Form PD-782.

(d) *List 3 materials.*—This order does not restrict shipments of List 3 materials, except to the extent that such shipments are controlled shipments of List 1 or List 2 materials.

(e) *Other materials.*—On and after March 1, 1943, no person shall originate a shipment by tank car of any material unless:

(1) Specified on List 1, List 2 or List 3; or

(2) Consigned to or for the account of the United States Army, Navy, Maritime Commission or War Shipping Administration, or corresponding Canadian agencies specified in Priorities Regulation No. 14; or unless the material shipped is procured pursuant to the Act of March 11, 1941 (Lend-Lease Act), provided that at the time each such shipment is originated the material is in the form in which it is eventually to be delivered to a foreign country or its representative; or

(3) Specifically authorized by the Director General for Operations upon application by such person on Form PD-782, or, in emergency, upon application by telegram containing substantially the information called for by Form PD-782.

(f) *Carriers.*—The provisions of this order shall not apply to any carrier acting in the capacity of a carrier as distinguished from a carrier acting in the capacity of a shipper.

(g) *Miscellaneous provisions*—(1) *Applicability of priorities regulations.* This order and all transactions affected hereby are subject to all applicable provisions of War Production Board priorities regulations, as amended from time to time.

(2) *Applicability of other orders.* Nothing contained in this order shall be construed to limit the requirements of any other War Production Board order now or hereafter issued.

(3) *Territorial limitations.* This order shall apply only to shipments originating or reconsigned in the forty-eight States and the District of Columbia.

(4) *Appeals.* Any appeal from denials of applications or from directions pursuant to this order shall be made by filing a letter in triplicate, referring to the particular action appealed from and stating fully the grounds of the appeal.

(5) *Violations.* Any person who wilfully violates any provision of this order, or who, in connection with this order, wilfully conceals a material fact, or furnishes false information to any department or agency of the United States is guilty of a crime, and upon conviction may be punished by fine or imprisonment. In addition, any such person may be prohibited from making or obtaining further deliveries of, or from processing or using, material under priority control and may be deprived of prioriites assistance.

(6) *Communications to War Production Board.* All reports required to be filed hereunder, and all communications concerning this order shall, unless otherwise directed, be addressed to: War Production Board, Washington, D. C., Ref.: T-1 (specified commodity).

(P.D. Reg. 1, as amended, 6 F.R. 6680; W.P.B. Reg. 1, 7 F.R. 561; E.O. 9024, 7 F.R. 329; E.O. 9040, 7 F.R. 527; E.O. 9125, 7 F.R. 2719; sec. 2 (a), Pub. Law 671, 76th Cong., as amended by Pub. Laws 89 and 507, 77th Cong.)

Issued this 30th day of January 1943.

CURTIS E. CALDER,
Director General for Operations.

Lists Attached to General Transportation Order T-1

List 1 (Zoned Shipments)

1. *Molasses*: Shipments of 200 miles or more in tank cars or tank trucks, originating on or after March 1, 1943, of blackstrap, invert, edible or hydrol molasses, except shipments of such molasses for the manufacture of yeast or citric acid. The term molasses shall be construed to include the residuum of such molasses.

Climatic Conditions Affecting the Sugar Cane Crop of 1942

(*Sam H. Smith, Assistant Agronomist*)

The production of sugar cane is greatly dependent upon the climatic conditions under which it is grown. These conditions not only affect the growth and sucrose production, but also determine to a great extent the degree of disease and insect injury.

A good sugar cane season should begin with light rainfall and moderate temperature in January, February and March. An early, warm spring and hot summer with sufficient rainfall to maintain good moisture in the soil leads to rapid growth. A cool, dry fall is necessary to get the desired sucrose production in the cane.

Tables Nos. 1 through 6 show the temperature and rainfall data for the year 1942 at the Louisiana State University Sugar Station. The 1942 data are also compared to that of 1938 as this was a record sugar cane year.

From tables 1 and 2 it will be seen that the mean temperature throughout 1942, with the exception of November, was considerably lower than for the average of the 12 year period. Also, as shown in tables 3 and 4 the number of hours above 90° F during 1942 was extremely low. This fact is important as

sugar cane grows faster at temperatures above 90°.

The rainfall was favorable in the early part of the year but became so heavy in some months that the cane crop could not be properly cultivated.

Although the weather conditions cannot be controlled, a good drainage system, good soil preparation and proper cultivation will help overcome adverse conditions.

TABLE No. 1
Comparison of mean temperature for 1942 with the twelve year average mean temperature for 1930 through 1941

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Average mean temp. 1930 through 1941	53.2	55.6	60.1	66.7	73.8	79.8	82.1	81.7	78.4	69.9	58.3	54.3
Mean temp. for 1942	47.0	49.4	57.7	66.1	73.4	78.6	80.7	80.3	74.5	69.0	61.8	54.0
Departure	—6.2	—6.2	—2.4	—.6	—.4	—1.2	—1.4	—1.4	—3.9	—.9	+3.5	—.3

TABLE No. 2
Comparison of mean temperatures of 1942 and 1938

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Mean temp. for 1938	52.1	59.6	68.8	66.1	74.2	79.4	81.2	81.6	77.6	69.7	58.1	51.8
Mean temp. for 1942	47.0	49.4	57.7	66.1	73.4	78.6	80.7	80.3	74.5	69.0	61.8	54.0
Departure	—5.1	—10.2	—11.1	none	—.8	—.8	—.5	—1.3	—3.1	—.7	+3.7	+2.2

TABLE No. 3
Comparison of temperature above 90° F. for 1942 with the nine year average for 1933 through 1941

Hours above 90° F.	May	June	July	August	Sept.	Oct.	Total	No. of days temp. went above 90° F.
Avg. hours above 90° F. 1933 through 1941	1.1	45.4	63.4	83.2	49.3	4.4	246.8	61.3
Hours above 90° F. for 1942	7.0	3.0	44.0	15.0	11.0	none	80.0	25.0
Departure	+5.9	—42.4	—19.4	—68.2	—38.3	—4.4	—166.8	—36.3

TABLE No. 4
Comparison of temperature above 90° F. for 1942 and 1938

Hours above 90° F.	May	June	July	August	Sept.	Oct.	Total	No. of days temp. went above 90° F.
Hours above 90° F. in 1938	4	47	62	107	46	9	275	72
Hours above 90° F. in 1942	7	3	44	15	11	0	80	25
Departure	+3	—44	—18	—92	—35	—9	—195	—47

TABLE No. 5
Comparison of the rainfall for 1942 with the thirteen year average rainfall from 1929 through 1941

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Average from 1929 through 1941	6.04	4.67	3.76	4.77	4.87	3.69	6.36	5.10	3.99	3.62	5.06	5.74	57.67
Rainfall for 1942	1.49	6.16	5.04	12.20	1.96	9.87	5.25	10.24	6.86	3.91	.47	5.09	68.54
Departure	—4.55	+1.49	+1.28	+7.43	—2.91	+6.18	—1.11	+5.14	+2.87	+.29	—4.59	—.65	+10.87

TABLE No. 6
Comparison of rainfall for 1942 with 1938

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Rainfall for 1938	4.57	3.78	1.82	4.55	1.04	4.17	5.45	6.40	2.24	1.47	2.71	3.26	41.46
Rainfall for 1942	1.49	6.16	5.04	12.20	1.96	9.87	5.25	10.24	6.86	3.91	.47	5.09	68.54
Departure	—3.08	+2.38	+3.22	+7.65	+.92	+5.70	—.20	+3.84	+4.62	+2.44	—2.24	+1.83	+27.08

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A Comparative Milling Test of Average and Trashy Sugar Cane

(*J. C. Etheredge* and H. C. Henry***)

During the 1939 grinding season, milling tests run on trashy cane at Audubon Factory by William Kenda@ and A. G. Keller showed 92.45% average sucrose extraction from trashy cane vs. 92.26% extraction from clean cane of the same variety. In 1941, Arnold@ and Keller continued tests on trashy cane resulting in an average extraction of 91.03%, which was 0.19% higher than the factory to-date figure at the time the tests were made. Results in each case were based on apparent sucrose content of juice and of bagasse. Information as to rate of grinding, mill settings, pressure on mills, and whether compound maceration was used in the tests was not given.

Continuing this investigation, we present a single comparative milling test at this time for the reason that it in part corroborates the findings of these investigators and suggests an explanation for their results.

It is realized that too much significance should not be attached to a single comparative test. However, we believe that the problem of milling trashy cane is of sufficient importance to the Louisiana Sugar Industry at this time to warrant this presentation as one of a series of such tests.

Milling Data

Milling equipment at Audubon Sugar Factory consists of knives, single crusher, and nine rolls, all motor driven. Crusher is 20″x24″ and mills are 18″x24″. Crusher has 2″ grooving, first mill three grooves per two inches, and second and third mills one-half inch grooving. All grooving is 55 degrees, and feed rolls on all mills have Messchaert grooving. Top rolls of all mills are cross-grooved.

TABLE I

	Average Cane	Trashy Cane
Voltage of mill motors	100	100
Crusher speed, ft. per minute	28.0	28.0
1st Mill speed, ft. per minute	23.3	23.3
2nd Mill speed, ft. per minute	24.5	24.5
3rd Mill speed, ft. per minute	29.8	29.8
	Average Cane	**Trashy Cane**
Hydraulic Pressure, Crusher	75 tons	75 tons
Hydraulic Pressure, 1st Mill	90 tons	90 tons
Hydraulic Pressure, 2nd Mill	95 tons	95 tons
Hydraulic Pressure, 3rd Mill	100 tons	100 tons

*Supt. Audubon Sugar Factory, La. State University.

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@*The Sugar Bulletin,* June 15, 1942.

Description of Tests

On November 26, 1942, a milling test was run on C.P. 29-320 Plant cane as delivered to the factory. November 28 a similar test was run on C.P. 29-320 Trashy Plant cane. Samples of crusher juice, juice from last mill roll and bagasse were taken every 15 minutes. A sample of dilute juice was taken from each scale tank. Samples were composited and analyses of composite samples made at the end of the test. Maceration water was measured, and bagasse and dilute juice weighed. Per cent trash in cane in each case was determined by taking a representative bundle of cane and weighing it, then cleaning by hand. The trash from the cane was weighed and per cent trash calculated.

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The trashy cane was merely cut and properly topped by hand, no cleaning having been done.

These tests were carried out under practically identical conditions. The same variety of cane from the same plantation was ground in each case (C.P. 29-320 Plant). Mill speeds were kept the same, as was also hydraulic pressure on the mills. The maceration water valve was set the same; cold water maceration was used. In each test all of the last mill juice was pumped back in front of the second mill.

The results of these comparative tests are presented in Table II.

TABLE II

	Average Cane	Trashy Cane
Date	Nov. 26, 1942	Nov. 28, 1942
Hours grinding	3.67	1.83
Hours lost	0.00	0.17
Lost time % total time	----	8.33
Cause of lost time	----	3rd mill chokes
Tons cane ground	51.800	22.780
Tons cane ground per hour	14.15	12.45
Tons cane ground per rev. 1st mill	0.048	0.042
Pounds fiber per rev. 1st mill	12.3	12.8
Per cent trash in cane	1.62	10.59
Tons cane ground per hr. exclusive of trash	13.92	11.13
Variety of cane	C.P. 29-320 Pl.	C.P. 29-320 Pl;
Maceration % cane	20.96	21.91
Dilution % Cane	16.59	19.62
Dilute extraction	95.04	92.23
Normal extraction	78.45	72.61
Sucrose extraction, apparent	93.23	93.07
Sucrose extraction, true	92.31	91.77
Sucrose extraction % cane, apparent	10.71	9.79
Sucrose extraction % cane, true	10.94	9.79
Sucrose in bagasse % cane, apparent	0.78	0.73
Sucrose in bagasse % cane, true	0.91	0.88
Per cent sucrose in cane, apparent	11.49	10.52
Per cent sucrose in cane, true	11.85	10.67
Per cent fiber in cane	12.96	15.29
Pounds 96 test sugar per ton cane estimated recoverable, apparent	186.3	173.5
Estimated recoverable, Clerget	190.4	173.5

		Analyses	
Crusher Juice:	Brix	17.80	17.94
	Sucrose	14.44	14.17
	Purity	81.12	78.98
Normal Juice:	Brix	17.35	17.49
	Sucrose	13.65	13.49
	Purity	78.70	77.12
Dilute Juice:	Brix	14.32	13.77
	Sucrose, apparent	11.27	10.62
	Sucrose, Clerget	11.52	10.62
	Purity, apparent	78.70	77.12
Residual Juice:	Brix	6.06	5.96
	Sucrose	4.53	4.23
	Purity	74.75	70.97
Bagasse:	Sucrose, apparent	3.00	2.46
	Sucrose, invertase and copper reduction	3.52	2.96
	Moisture	46.00	45.00
	Fiber	49.99	51.53
	Per cent cane	25.92	29.68
Trash:	Moisture	----	47.00
	Gums	----	0.637

Clerget tests were made and apparent brix, sucrose and purity determined on dilute juice from both average and trashy cane; apparent sucrose and purity determined on last mill juice. Bagasse was analyzed for moisture, for apparent sucrose (direct polarization) and for true sucrose by invertase and copper reduction. Per cent fiber in bagasse was calculated.

An average sample of trash from the trashy cane was digested in boiling water for one hour and the extracted gums precipitated with alcohol. Per cent moisture in the trash was also determined.

Discussion of Results

Results show that direct polarization and thus apparent sucrose and purity are affected by impurities extracted from the trash. On the average cane, using direct polarization as the basis of calculations, the mills extracted 93.23% of the sucrose, and from the trashy cane 93.07%, a difference of 0.16%. But true sucrose (Clerget) extracted per cent of sucrose in cane was 92.31% from average cane as compared with 91.77% from trashy cane, a difference of 0.54% in favor of clean cane.

Attention is called to purities of last mill juices. From average cane, purity of last mill roll juice was 74.75% which is a drop of 3.95 points from dilute juice purity. From trashy cane, purity of last mill roll juice was 70.97 which was 6.15 points below that of dilute juice. This indicates an extraction by the mills of considerably more impurities from trashy cane than from clean or average cane. These added impurities in the juice result in greater loss of sucrose to final molasses, with a corresponding decrease in yield of sugar.

With an assumed boiling house efficiency of 96.52 (which is the factory average for this week), estimated yield of 96 test sugar from the average cane was 186.3 pounds per ton, and from trashy cane 173.5 pounds if calculated on basis of direct polarizations. Calculated on basis of true sucrose (Clerget) in dilute juice, these yield figures are 190.4 and 173.5 pounds respectively. But, taking into account the additional impurities entering process from trashy cane, we can only conclude that boiling house efficiency in the latter case was less than in the former. That is, actual yield of sugar in the latter case was something less than 173.5 pounds per ton.

Per cent gums by weight extracted from trash was 0.63%. This is equivalent to 1.35 pounds of gum in trash per ton of trashy cane. It is not likely that all of these gums were extracted by the mills. That a considerable portion of them do enter the juice is not doubted. This probably explains the difficulty encountered in clarifying juices when grinding trashy cane, and also increased viscosity of syrups, masse-

cuites and molasses which result in slower boiling in the evaporators and pans, and slower drying sugar, with increased molasses losses. A number of analyses of final molasses at La. Sugar Experiment Station show an average gum content of about 2.00%*.

Regarding effect of trash on milling capacity, it is interesting to note that 13.92 net tons of trash-free cane were ground per hour on the average or comparatively clean cane (1.62% trash) while 11.13 tons net cane were ground per hour of the trashy cane (10.59% trash). This showed a drop of 13.92-11.13 or 2.79 tons per hour in net (trash-free) cane ground, or a decrease of 20.0% in grinding capacity.

The fact that mill chokes occurred when grinding trashy cane, which did not happen with the clean or average cane, indicates that the mills would have taken more than 13.92 tons per hour of the average cane with the mill setting and mill speeds used, but that grinding rate of 11.13 net tons cane during trashy cane test was the limit. In this connection it is believed that pounds fiber passed through the mills per mill revolution is a much more accurate index of mill capacity than is tons or pounds of cane. Grinding trashy cane, pounds fiber per revolution of first mill was 12.8, and average cane 12.3. If we assume that the mills will take the same amount of fiber in each case before reaching maximum capacity, grinding capacity with average cane would have been 13.92x12.8 /12.3 or 14.49 tons. On this basis, grinding capacity of net tons of trash-free cane during the trashy cane milling test was 76.8% of mill capacity when grinding the average cane.

Conclusions

One should not assume that the results of this test show with mathematical accuracy just what may be expected when grinding trashy cane of any variety at any factory under any kind of weather conditions. What they do indicate however is that trashy cane:

Decreases milling capacity.

Results in more impurities entering the manufacturing process.

Results in sucrose extraction figures being misleading.

Mill work is not as good as the apparent sucrose figures indicate.

Affects polarization of raw juice, which may result in sugar recovery calculations being less accurate. It should follow that undetermined loss in the sucrose balance will be higher, although it may be only apparent and not real.

In giving consideration to the matter of grinding trashy cane the following factors should be taken into account:

Decrease in harvesting costs.

Increase in gross tonnage handled, with corresponding increase in hauling costs.

Decrease in grinding rate, which normally means a longer crop and higher factory labor cost per ton cane.

Some detrimental effect on manufacturing operations, both in milling and fabrication,—although this might be counter-balanced to some extent by increased fiber due to the trash—and a probable decrease in sugar recovery due to added impurities entering process, and to decrease in true sucrose extraction.

It follows that the basis for comparison should be tons of net trash-free cane.

*Spencer's Handbook for Cane Sugar Manufacturers.

Milling Results with 1-8" Grooving vs. 1-2" Grooving on Last Mill

(By J. C. Etheredge, Audubon Sugar Factory, University Station, Baton Rouge, La.)

Mill equipment at Audubon Sugar Factory consists of knives, single crusher and 9 rolls, all motor driven. Crusher is 20"x24" and mills 18"x24". At the beginning of the 1942 crop grooving was as follows:

Crusher—2" pitch, 55 degrees
1st Mill—0.667" pitch, 55 degrees
2nd Mill—1/2" pitch, 55 degrees
3rd Mill—1/2" pitch, 55 degrees

Top rolls of all mills had K grooving, and Feed Rolls had Messchaert grooving.

Mill settings at beginning of crop follows. Turnplates on hand did not permit more desirable settings.

	Cr	Br	Kf	Kb	Kc
Crusher	5/8" T. to Bot.				
1st Mill	1/4"	5/16" T. to Bot.	7/8"	1 5/16"	1/2"
2nd Mill	T. to T.	1/8" T. to Bot.	13/16"	1 1/16"	5/16"
3rd Mill	1/4" T. to Bot.	I. to I	15/16"	1 3/16"	5/16"

Cr=Cane Roll opening
Br=Bagasse Roll opening
Kf=Turn-plate opening at toe
Kb=Turn-plate opening at heel
Kc=Turn-plate clearance to tip of grooving of Bagasse Roll.

About the middle of the crop, the crusher was closed 1/8", other settings remaining the same until the beginning of the last week of crop. At that time the three rolls of last mill were taken out and replaced with 18" rolls of 1/8" grooving, 55 degrees. No K grooving used. Feed roll had Messchaert grooving. Setting of the 1/8" grooved rolls follows:

	Cr	Br	Kf	Kb	Kc
3rd Mill	1/4"	1/16" T. to Bot.	1 3/32"	1 1/2"	1/2"

Operating conditions during the last two weeks of the crop were probably more nearly the same than during previous periods. Milling results obtained with 1/8" grooving is therefore compared with results obtained with 1/2" grooving for the 6th week of the crop, which was the week immediately preceding the change to 1/8" grooving on 3rd Mill.

Date	Nov. 23-28/42	Nov. 30-Dec. 4/42
Days grinding	6	5
Hours grinding	44.25	38.33
Hours lost	7.41	7.84
Lost time % total time	14.34	16.98
Tons cane ground	584.427	436.991
Tons ground per hour	13.21	11.40
Maceration % cane	23.83	19.72
Normal Extraction	77.76	76.06
Dilution % Cane	19.49	15.28
Dilute Extraction	97.25	91.34
Sucrose extracted % sucrose in cane	93.20	92.67
Sucrose extracted % cane	10.21	10.58
% Sucrose in cane	10.95	11.42
% Fiber in cane	13.23	13.60
Speed of Crusher, Ft./Min.	28.0	33.1
Speed of 1st Mill Ft./Min.	23.3	26.5
Speed of 2nd Mill, Ft./Min.	24.5	28.9
Speed of 3rd Mill, Ft./Min.	29.8	34.4
Voltage	100	112
Hydraulic Pressure, Crusher	75 tons	75 tons
Hydraulic Pressure, 1st Mill	90 tons	90 tons
Hydraulic Pressure, 2nd Mill	95 tons	95 tons
Hydraulic Pressure, 3rd Mill	100 tons	100 tons
ANALYSES		
Normal Juice:		
Brix	16.95	17.37
Sucrose	13.14	13.91
Purity	77.49	80.09
Dilute Juice:		
Brix	13.55	14.47
Sucrose	10.50	11.59
Purity	77.49	80.09
Residual Juice:		
Brix	5.59	5.10
Sucrose	4.14	3.94
Purity	74.06	77.25
Bagasse:		
Sucrose	2.80	2.95
Moisture	46.44	47.79
Fiber	49.77	47.92

On November 30, the first day the 1/8" grooving was in operation, difficulty was experienced from 3rd mill chokes. A considerable amount of juice ran off

the end of the turn-plate, the end opposite to the drive. This end of cane roll was backed off 2 turns (about 1/32" more opening) and the bagasse roll on this end backed off 4 turns,—about 1/16". Maceration was cut slightly. This did not eliminate choking entirely, but helped a great deal. It gave a more even operating opening from one end of the rolls to the other, as normally, the top roll on the gear side floats higher than on the opposite end due to counter-thrust of gear teeth of cane roll.

It will be noted that the mills were set slightly more open with 1/8" grooving than had been the case with 1/2" grooving.

Rates of grinding for each day were as follows:
Nov. 30—10.82 tons per hour
Dec. 1—10.82 tons per hour
Dec. 2—11.60 tons per hour
Dec. 3—12.25 tons per hour
Dec. 4—11.24 tons per hour

During the week of November 23 to 28, we were grinding 29-320 almost altogether. During the week November 30-December 4, considerable 28-19 and some 290 was ground. The results obtained are therefore not strictly comparable, as fiber content of cane averaged higher November 30-December 4. Too, mills were speeded up some the last week, in order to get more tonnage through, though the same mill-speed ratios were maintained.

It was noticed that the mill took 28-19 better than it took 290.

The 1/8" grooving did not permit such flexibility in grinding rate. That is, when the feed was light, mill work was very poor. When feed was heavy, the 3rd mill choked. A grinding rate of roughly 10 tons to 12.50 tons per hour had to be maintained to get good mill work. This was at mill speeds given above.

With a fairly heavy rate of grinding, the back roll did not seem to take the feed uniformly. An occasional spurt of juice from the turn-plate also indicated this. Under such conditions the mill work could not be the best.

Possibly, with a different mill setting, the 1/8" grooving would have given better results. Milling efficiency would also be affected by better preparation of cane for milling. Under conditions of operation as given above, results were not as good as had been obtained with 1/2" grooving. Extraction was lower, as was also grinding rate.

J. C. ETHEREDGE,
December 10, 1942.

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National Safety Council Designates a Louisiana Safety Ace

The critical shortage of trained manpower has made the National Safety Council's campaign to "Save Manpower for Warpower" essential to the War effort.

To give added significance to safety, the National Safety Council each week selects an industrial war worker with an outstanding record for straight and creative thinking and actions, beyond the call of duty, in terms of his plant's safety program.

The worker's safety achievements are given national recognition on the Blue Network program, "Men, Machines and Victory." This program sponsored by the National Safety Council's war production fund to conserve manpower. In addition to the radio recognition, a $100.00 war bond is mailed to the worker.

The individual selected by the National Safety Council to be designated as a "Safety Ace" must have rendered outstanding safety service by such things as (1) recognizing an accident hazard and designating a corrective measure, (2) being responsible for a safety idea or device that actually has reduced accidents, and (3) performing some similar distinctive service in the field of accident prevention beyond the ordinary call of duty.

Radio network mention of the plant in which the honored worker is employed identifies the man and his company as cooperating in the nation-wide campaign to "Save Manpower for Warpower." It also stimulates the safety thinking of all industrial employees by encouraging them to listen to the "Men, Machine and Victory" program, not only because of the Safety Ace awards, but because of the dramatic safety episodes presented by the broadcast.

On February 1, 1942, J. Aron & Co., Inc., Tallieu, La., operators of a raw sugar factory and a refinery, employed Mr. Arnaud John Chenet as an engineer in charge of their steam power plant. He is employed in a professional capacity and not as an official safety director.

Mr. Chenet, who is 43 years old, has spent his entire life in the sugar industry, having worked in Cuba, El Salvador, Santo Domingo, Venezuela, Louisiana, Florida and California.

In 1923 Mr. Chenet, while employed in the sugar industry in Cuba, became safety conscious when he witnessed the electrocution of four men due to someone's carelessness. He complained to the management about hazards in the factory and resigned in disgust when no corrections were made, came back to the States, took up a course in safety engineering and has been practicing the gospel of safety ever since.

Upon assumption of his duties as engineer in charge of the steam power plant he immediately demanded that safety precautions be installed in his department for the protection of his workers. The management, after listening to his plea and accepting the soundess of his judgment in safety work, appointed him Safety Director. Mr. Chenet does not receive any additional remuneration for his work in safety, the appointment being made primarily in recognition of his interest in the work and also to give him the proper authority in inspection and organizational work.

Mr. Chenet's first move was to join the National Safety Council so as to receive information pertinent to his problems. Being a first aider for twenty years or more he organized an Industrial First Aid class of thirty employees and opened up two First Aid Stations in the refinery. He made sixty-seven recommendations to correct existing hazards and with determination effected them in short order.

His next efforts were to insure adequate fire protection, hold regular Safety meetings, make periodical inspections, improve sanitation, correct traffic regulations and constantly preach and sell Safety to the men. Through Mr. Chenet's efforts there has been a reduction of accident frequency of thirty-eight percent for the year, as compared with previous periods in the refinery.

We join the J. Aron & Company organization in its just pride in the recognition awarded Mr. Chenet by having been designated as a Safety Ace on the National Safety Council's "Men, Machines and Victory" program on the Blue Network on February 26. Mr. Chenet was invited to New York to participate in the program.

As a further appreciation of his efforts and achievement the National Safety Council used Mr. Chenet's case history as a basis for dramatization on the program of February 26, practically the entire program being built around Mr. Chenet's record and achievements, rather than the customary mere mention of the winner.

We salute Mr. Chenet and J. Aron & Company!

(*Editor of the Sugar Bulletin*)

Farm Machinery Repairs

(*Office of War Information, War Production Board*)

Farmers are given further assurance that their farm machinery will not go unrepaired for the lack of welding rods and electrodes following action taken recently by the War Production Board.

WPB Regional Directors are now authorized to approve, countersign and issue individual preference ratings up to and including AA-1 on purchase orders for welding rods and electrodes used in repairing farm machinery and equipment. The same authority is given *District Managers* to approve ratings up to and including AA-2X.

The ratings, however, must not be for material in excess of $25 in value or to supply more than a 45-day maximum inventory, whichever is the lesser.

The present measure insures the filling of purchase orders received by the large distributors from local repair shops and small dealers who service and supply farmers' welding needs. Heretofore such purchase orders rarely bore higher than A-10 ratings, and stood little chance of being filled by distributors whose stock was continually being depleted by higher rated calls upon it.

Officials of WPB's Farm Machinery and Equipment Division expect that the present action will make available a supply of welding rods and electrodes adequate to meet all the demands to repair farm machinery. They ask repair men and distributors to make the most effective use of the supply, and to adopt every possible measure to conserve it. They point out that bare, dust coated, or light dipped electrodes contain little critical material; also that "seconds" or rejected electrodes can be used effectively on average repair work where the electric arc process is employed. Where gas welding is the process, a low carbon steel rod will do the average job.

For work requiring more than an average welding operation—such as building up worn tractor treads —a high carbon bare rod, although it will not last quite as long as a hard surfaced one, will do the job and keep the farm machine running.

Sugar Consumption

(By C. J. Bourg)

The U. S. Department of Commerce has compiled figures to show through which channels sugar is consumed in the United States, and in what percentages. The figures for 1939, for 1941 and for 1942 have become available. The divisions and classifications are not exactly the same for each year, but each table gives definite indications as to how sugar goes into consumption in the United States.

The figures confirm the fact that when statisticians and economists figure costs to "consumers" by multiplying the increase in the price of sugar by the total consumption, they are at least 40 per cent wrong. The candy bar or the pop bottle remains the same size regardless of the price of sugar.

CONSUMPTION OF SUGAR—1939

	Thousands of Short Tons of Refined Sugar	% of Total Sugar Consumed
Bread and bakery products	574	8.9
Confectionery and related products	541	8.4
Canning and preserving	300	4.7
Flavoring, extracts and syrups	230	3.6
Non-alcoholic beverages	234	3.7
Alcoholic beverages	15	.2
Dairy products	182	2.8
Meat packing	26	.4
Grain meal products	26	.4
Tobacco	21	.3
Other foods	123	1.9
Household and restaurant use	4,128	64.7
Total	6,400	100.0

Raw sugar equivalent 6,848 against 6,400 refined.

ESTIMATED CONSUMPTION OF SUGAR—1941

	Thousands of Short Tons Raw Value	% of Total Sugar Consumed
Household and restaurant use	4,594	61.9
Packing industry	682	9.2
Candy and confectionery	478	6.4
Canning and preserving	395	5.3
Soft drinks	290	3.9
Flavoring, extracts, etc.	289	3.8
Dairy products, including ice cream	240	3.2
Chocolate and Cocoa	169	2.3
Other industries	299	4.0
Total	7,436	100.0

ESTIMATED CONSUMPTION OF SUGAR—1942

	Thousands of Short Tons Raw Value
Home consumption	2,451
Home Canning	463
Armed forces	427
Lend-Lease	120
Institutions, restaurants, etc.	601
Industrial	2,546
Total	6,608

AVERAGE RETAIL PRICES OF CERTAIN FOODS, WITH COMPARISONS[1]
(In cents per pound except where noted)

	Average Retail Price Dec. 16, 1941	Average Retail Price Dec. 15, 1942	Increase	Per Cent Increase
Prunes	10.7	16.0	5.3	49.5
Oranges (doz.)	30.0	44.0	14.0	46.7
Chicken	32.1	43.1	11.0	34.3
Rice	9.4	12.5	3.1	33.0
Potatoes (15 lbs.)	40.0	51.9	11.9	29.8
Butter	42.3	54.8	12.5	29.6
Lamb (leg)	30.5	38.8	8.3	27.2
Pork Chops	34.5	43.1	8.6	24.9
Lard	15.2	18.8	3.6	23.7
Eggs (doz.)	49.0	59.3	10.3	21.1
Ham (whole)	31.9	38.5	6.6	20.7
Corn meal	4.4	5.2	.8	18.2
Flour (10 lbs.)	49.2	55.6	6.4	13.0
Sugar	6.1	6.9	.8	11.6

It is to be observed that the percentage of price increases for most of these foods has been more than double that of sugar.

[1] **Source:** Retail Food Prices, Department of Labor.

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Wage Rate Determination

United States Department of Agriculture
Agricultural Adjustment Administration
University Station
Baton Rouge, Louisiana

March 3, 1943

To: Parish Administrative Officers and County Committeemen in Parishes Producing Sugarcane for Sugar

Subject: 1943 Production and Cultivation Wage Rate Determination

We have been advised by the Sugar Branch of the Food Distribution Administration that because of recent action by the U.S. Senate in voting to exclude benefit payments to farmers in establishing price ceilings, and other uncertainties in the farm legislative program, it is intended that no determination of fair wages for the early season work will be issued for the time being and until the outcome of the pending congressional measures are known insofar as they affect probable income to growers for the 1943 crop.

It was also stated that when the 1943 production and cultivation wage determination is issued, it will include a provision stating that a grower will be deemed to have complied with Section 301(b) of the Sugar Act if, prior to the date of issuance of the determination, he paid wages which were not less than those specified in the 1942 production and cultivation wage determination or the wage agreed upon between the grower and the laborer, whichever was higher.

It should be made clear to all growers in your parish that a new determination will have to be issued in any case which will establish fair and reasonable planting and cultivating wage rates for the 1943 crop, to be effective on work performed after the date of issuance of the determination.

In other words the 1942 planting and cultivating wage rates or the rates agreed upon by the producer and the laborer, whichever is higher, will remain in effect until a 1943 planting and cultivating wage rate determination is issued, after which time the wages specified in the determination will take effect.

A. C. Smith
Acting Administrative Officer in Charge

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Sweets for Soldiers

The following press release indicates that the candy people have become alive to the necessity of doing some educational work on *candy* as food. All *sugar* producers should be interested in following the proposed radio program.

"The Council on Candy as a Food in the War Effort announced plans today for a new 13-week radio program which will be broadcast coast-to-coast over the red network of the National Broadcasting Company. The Council on Candy as Food in the War Effort is sponsored by the National Confectioners' Association.

"Ernest K. Lindley, chief of the Washington Bureau of Newsweek, will be a regular commentator on the program, which will originate in Washington and be heard at 3:00 o'clock Eastern War Time on Sunday afternoons.

"The series will be of a public service nature and will be built around a general subject of extreme importance to the Nation. A number of prominent Washington personalities have been invited to participate as guest speakers during the series.

"Program format and schedule of guest speakers will be announced later."

Bags

WPB has issued instructions on textile and paper shipping bags, affecting sugar as follows:

* * * (b) (ii) After April 1, 1943, no user shall pack any beans, cement, chemicals, feed, fertilizers, flour, meal or cereals, nuts, salt, plaster, potatoes, rice, seeds, starch, or *sugar* in new textile or paper bags other than bags of the following net weight capacities:

2 pounds
5 pounds
10 pounds
25 pounds
50 pounds
100 pounds or over

provided that the following commodities also may be packed as follows:

Cement in 94 pound bags
Plaster in 60 pound and 94 pound bags
Potatoes in 15 pound bags
Seeds in one-bushel and two-bushel bags

* * * (b) (xii) No dealer in textile bags or commercial emptier shall sell or deliver any textile bag which has been used for packing *raw sugar*, and which is capable of carrying *raw sugar* to any user except for packing *raw sugar*.

Food For You

The 1943 production goal for meat is 25.7 billion pounds, which is a 50 percent increase over the 5-year, 1936-1940, average production and 16 percent increase over the 1942 production. At least 25 percent, or over 6 billion pounds, of meats will go in 1943 to fill military and lend-lease needs. Many Southern farmers may feel that they cannot contribute to this goal, but any farmer who has been producing no meat, or less than he needs, will make a considerable contribution by producing enough for his family. By so doing, he will add to the total supply of meat and save himself the cash cost which is considerably higher than the cost of producing meat.

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The responsibility of feeding and clothing the fighting forces of all the United Nations rests squarely upon the shoulders of American farmers.

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Thousands of farmers in the Southwest recommend Mobilgas, Mobiloil, Mobilgreases and other Magnolia Products. They know from experience that Magnolia fuels and lubricants can be depended upon to keep machinery operating efficiently and economically. It will pay you to consult your local Magnolia Agent.

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THE SUGAR BULLETIN

Entered as second-class matter April 13, 1925, at the post office at New Orleans, La., under Act of March 6, 1879.

We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 21 NEW ORLEANS, LA., APRIL 1, 1943 No. 13

Statement with Respect to Executive Order No. 9240

(By C. J. Bourg)

The American Sugar Cane League, on behalf of the Louisiana processors of sugarcane into sugar, submits that the sugar processing operations have always been continuous for the period of the harvesting season, which averages about 70 days per annum. The reasons for continuing operations during the harvesting season without stops or shut-downs for Sundays or holidays, are not due to war production either as to volume or acceleration of output. Continuous operations are necessary because of the perishable nature of the sugarcane, the susceptibility of sugarcane juices to inversion during processing, the fact that a plant cannot get into full operation within 48 hours from the time of starting the process, and the necessity for avoiding the severe freezes of late December and January each year.

The continuous operations of sugar processing plants, therefore, do not represent a change resulting from the necessities of war production and are not attributable to the "emergency conditions" of the current War referred to in the Executive Order No. 9240.

It is not our intention to discuss at this conference the legal interpretation of the Executive Order No. 9240, but rather to present facts concerning the operations of a sugarcane processing plant in Louisiana, as they pertain to or might be affected by Executive Order No. 9240.

Sugarcane is a perishable farm product which must be processed immediately to obtain maximum results. Unless processed within one or two days of being severed from the soil, the sugar content of the cane begins to decrease very rapidly. In plain language, the cane sours after it has been cut. The quicker you process the cane the more sugar you recover.

Even after the mill crushes the cane, the tendency towards inversion of any juice delayed in process makes such cane juice definitely perishable. It would be impractical and prohibitive to shut down the plant every week-end because of the perishability of the juices in process. Furthermore, at least 48 hours is required after the first stalk of cane is introduced into the crushers before the sugar plant gets into full operation. Consequently, to suspend operations every Sunday would mean the loss of two days or more per week, rather than just the 24 hours of Sunday.

The harvesting season for sugarcane in Louisiana is a period of intense activity for 70 days each year, on the average. It amounts to a race against freezing temperatures. Unfortunately the sugarcane is green until late Fall and when immature sugarcane is processed, the amount of sugar recovered is very much reduced. For instance, in 1942 the harvest began in the early part of October and the extraction per ton of sugarcane in the first days of operation was just about 150 pounds of sugar. In late December, the same plants were extracting 200 pounds of sugar per ton of cane. Thus, it is evident that the beginning date of the harvesting activities cannot be advanced because of the actual losses in sugar. On the other hand, the season cannot be extended into the winter because after freezing temperatures, the sugarcane deteriorates even more rapidly than is normal and after a week or so following a severe freeze the cane becomes no longer suitable for extracting sugar.

It is evident that the question whether work will be done in a sugar factory on Sunday during the harvesting season is not one within the discretion of the employer. When the cane crop begins to mature, he must start operating continuously and in high gear. He has a perishable raw material. He has juices in process which are also perishable. He knows that it requires at least 48 hours to get into full production. He is racing against the prospect of the freezing temperatures of mid-winter, yet he cannot advance the beginning of his harvest because the cane is green and immature until late Fall. The nature of the farm product he handles and the process required to produce a merchantable non-perishable commodity for market, forces the decision as to continuous operation. That has always been the situation before the war and will be the situation after Peace is declared.

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans

Marcel J. Voorhies, Editor

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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.

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Relief Obtained

Title 29—Labor

Subtitle A—Office of the Secretary of Labor

PART 3—DETERMINATIONS RELATING TO OVERTIME, SUNDAY AND HOLIDAY PAY

Sugar Processing Industry

Upon application of the U. S. Beet Sugar Association and the United States Sugar Corporation, a hearing was held in Washington, D. C. on March 1, 1943, pursuant to Executive Order 9248 to determine whether the provisions of Section 1A (1) of Executive Order 9240 requiring the payment of double time compensation on the seventh consecutive day of a regularly scheduled work-week shall apply to the sugar processing industry.

After due consideration of the testimony presented at the hearing in support of and in opposition to the application, I have found that the nature of the exigencies of operations in this industry make it necessary and advisable for the successful prosecution of the war to determine that the provisions of section 1A (1) of Executive Order 9240 shall not apply to the sugar processing industry as defined in this order.

Now, therefore, by virtue of the power vested in me by Executive Order 9248, *It is ordered*, That in the case of an employer engaged in the processing of sugar beets or sugar-cane into sugar (but not refined sugar) or into syrup, the provisions of section 1A (1) of Executive Order 9240 shall not apply to his employees in any place of employment where he is so engaged.

Dated: March 24, 1943. FRANCES PERKINS
Secretary of Labor.

Wage and Salary Adjustments

(By Paul G. Borron, Jr.)

Many questions are being asked relative to the applicability of the President's Executive Order No. 9250 and the regulations issued thereunder, which regulate wage and salary adjustments, to sugar cane field and factory and other types of employment. The penalties for violating the order and regulations are very severe, particularly as to income tax liability, and every employer, before making any wage[1] or salary[2] adjustment, should first determine whether an approval of either the National War Labor Board or the Commissioner of Internal Revenue is necessary, and if necessary, application for approval should be filed. Approval is required in most instances.

Adjustments of all wages and salaries of $5,000.00 per year and less, except salaries paid to executive[3], administrative[4] and professional[5] employees, are subject to the jurisdiction of the National War Labor Board. Application for approval of such adjustments should be prepared on Form No. 10 of the National War Labor Board, and filed with the office of the Wage and Hour Division, United States Department of Labor, 916 Union Building, New Orleans, Louisiana. Adjustments of salaries of over $5,000.00 per year, and salaries of less than $5,000.00 paid to executive, administrative or professional employees, are subject to the jurisdiction of the Commissioner of Internal Revenue. Application for approval of such adjustments should be prepared on Form SSU-1 of the Treasury Department, and filed with the Regional Office of the Salary Stabilization Unit, Internal Revenue Service, Dallas, Texas.

No approval is required for either a decrease or increase in salaries or wages, if the employer employs eight or less individuals. Under General Order No. 30 of the National War Labor Board, issued on March 16, 1943, increases in wage or salary rates which do not bring such rates above 40c per hour may be made without the approval of the National War Labor Board, provided that such increases shall not furnish a basis either to increase price ceilings of the commodity or service involved or to resist otherwise justified reductions in such price ceilings. Further, certain types of individual adjustments, when they are made within established wage or salary rate schedules do not require prior approval. The most important promotions or reclassificataions, (2) individual merit increases within established rate ranges, (3) operations of an established plan of wage increases based on length of service, (4) increased productivity under piece work or incentive plan, (5) operation of an established apprenticeship or trainee system. Any wage or salary rate schedule relied upon for individual adjustments, unless the schedule was definitely established before October 3, 1942, should be submitted to the National War Labor Board or Treasury Department for approval before making adjustments in accord therewith.

Agricultural workers, paid wages or salaries not in excess of $2,400.00 per year are subject to the jurisdiction of the Department of Agriculture. At the present time no approval is required in order to increase such wages or salaries. To increase the wages or salaries of an agricultural worker paid more than $2,400.00 per year requires prior approval. No employer is permitted to decrease wages or salaries paid to agricultural labor below the highest rate paid for

such work between January 1, 1942, and September 15, 1942.

An employer of labor, including agricultural workers paid more than $2,400.00 per year, subject to the exemptions mentioned above, should use the following outline as a guide in making salary adjustments:

(a) Any increase in wages over the rate paid on October 3, 1942, requires prior approval of the National War Labor Board.

(b) In case of a salary rate of $5,000.00 or less per annum existing on October 27, 1942, any increase thereafter requires prior approval of the National War Labor Board.

(c) In case of a salary rate of $5,000.00 or less per annum existing on October 27, 1942, paid to an employee engaged in a bonafide executive, administrative or professional capacity, any increase after October 27, 1942, requires prior approval of the Commissioner of Internal Revenue.

(d) In case of a salary rate of more than $5,000.00 per annum existing on October 3, 1942, any increase thereafter requires prior approval of the Commissioner of Internal Revenue.

(e) Any decrease in wages or salaries below the highest rate paid for the particular work between January 1 and September 15, 1942, requires prior approval. The test as to whether the approval, if required, must be obtained from the National War Labor Board or the Commissioner of Internal Revenue is the same as for wage and salary increases.

If there is any case in which the employer is in doubt as to whether approval is required, he may obtain a special ruling from the National War Labor Board by submitting his question to the Wage and Hour Division, 916 Union Building, New Orleans, La., on Form No. 1 of the National War Labor Board, or in the case of salaries subject to the jurisdiction of the Commissioner of Internal Revenue, by submitting his question to the Regional Office of the Salary Stabilization Unit, Internal Revenue Service, Dallas, Texas, on Form SSU-2.

The American Sugar Cane League offers the facilities of its office and staff of employees in assisting its growers and processor members to comply with the provisions of this order and the regulations pertaining thereto.

Definitions:

1 Wages

The term "wages" or "wage payments" means all forms of direct or indirect compensation which is computed on an hourly or daily basis, a piece-work basis, or other comparable basis, for personal services of an employee irrespective of when rendered, including bonuses, additional compensation, gifts, commissions, loans, fees, and any other remuneration in any form or medium whatsoever (but excluding insurance and pension benefits in a reasonable amount).

2 Salary

The term "salary" or "Salary payments" means all forms of direct or indirect compensation which is computed on a weekly, monthly, annual or other comparable basis, except a wage basis, for personal services of an employee irrespective of when rendered, including bonuses, additional compensation, gifts, loans, commissions, fees and any other remuneration in any form or medium whatsoever (excluding insurance and pension benefits in a reasonable amount).

3 Executive

The term "employed in a bona fide executive capacity" shall mean any employee:

(i) whose primary duty consists of the management of the establishment in which he is employed or of a customarily recognized department or subdivision thereof, and

(ii) who customarily and regularly directs the work of other employees therein, and

(iii) who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight, and

(iv) who customarily and regularly exercises discretionary powers, and

(v) who is compensated for his services on a salary basis at not less than $30 per week (exclusive of board, lodging, or other facilities), and

(vi) whose hours of work of the same nature as that performed by employees not employed in an executive, administrative or professional capacity, do not exceed 20 percent of the number of hours worked in the workweek by the employees under his direction: Provided, That this subdivision (vi) shall not apply in the case of an employee who is in sole charge of an independent establishment or a physically separated branch establishment.

4 Administrative

The term "employed in a bona fide administrative capacity" shall mean any employee:

(i) who is compensated for his services on a salary or fee basis at a rate of not less than $200 per month (exclusive of board, lodging, or other facilities), and

(ii) (a) who regularly and directly assists an employee employed in a bona fide executive or administrative capacity (as such terms are defined in these regulations), where such assistance is nonmanual in nature and requires the exercise of discretion and independent judgment; or

(b) who performs under only general supervision, responsible nonmanual office or field work, directly related to management policies or general business operations, along specialized or technical lines requiring special training, experience, or knowledge, and which requires the exercise of discretion and independent judgment; or

(c) whose work involves the execution under only general supervision of special nonmanual assignments and tasks directly related to management policies or general business operations involving the exercise of discretion and independent judgment; or

(d) who is engaged in transporting goods or passengers for hire and who performs under only general supervision, responsible outside work of a specialized or technical nature requiring special training, experience, or knowledge, and whose duties require the exercise of discretion and independent judgment.

5 Professional

The term "employed in a bona fide professional capacity" shall mean any employee who is:

(i) engaged in work—

(a) predominantly intellectual and varied in character as opposed to routine mental, manual, mechanical, or physical work, and

(b) requiring the consistent exercise of discretion and judgment in its performance, and

(c) of such a character that the output produced or the result accomplished cannot be standardized in relation to a given period of time, and

(d) whose hours of work of the same nature as that performed by employees not employed in an executive, administrative or professional capacity do not exceed 20 percent of the hours worked in the workweek by such employees; Provided, That where such non-professional work is an essential part of and necessarily incident to work of a professional nature, this subdivision (d) shall not apply, and

(e) requiring knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and study, as distinguished from a general academic education and from an apprenticeship, and from training in the performance of routine mental, manual, or physical processes; or predominantly original and creative in character in a recognized field of artistic endeavor as opposed to work which can be produced by a person endowed with general manual or intellectual ability and training, and the result of which depends primarily on the invention, imagination, or talent of the employee, and

(ii) compensated for his services on a salary or fee basis at a rate of not less than $200 per month (exclusive of board, lodging, or other facilities): Provided, that this subdivision (ii) shall not apply in the case of an employee who is the holder of a valid license or certificate permitting the practice of law or medicine or any of their branches and who is actually engaged in the practice thereof.

Eastern Club Meets

Plaquemine, Louisiana
March 11th, 1943

The Louisiana Sugar Producers' Club (Eastern Division) was called to order at 1 P.M. by President Horace Nelson. The following gentlemen were present.

Horace Nelson, President, Raceland
J. T. Landry, Vice-President, Tallieu
C. F. Daigle, Labadieville
N. B. Gibbens, Mathews
George M. Murrell, Bayou Goula
J. Wilson Lepine, Thibodaux
N. J. Melancon, Plaquemine
Chas. E. Landry, Belle Rose
Henry Sobert, Belle Rose
R. J. LeBlanc, Napoleonville
Ernest R. Theriot, Houma
Dr. E. V. Abbott, Houma, U. S. D. A.
George C. Pitcher, Lakeland
Hampton P. Stewart, Lakeland
Louis J. Wilbert, Plaquemine
Emile A. Maier, Houma
A. B. Curet, County Agent, New Roads
Ivy J. Redmond, Montegut
Richard Sonnier, County Agent, Plaquemine
Dr. George Arceneaux, Houma, U. S. D. A.
H. A. LeBlanc, Reserve
James LeBlanc, Plaquemine
Edw. J. Gay, Plaquemine
J. Evan Delahaye, Plaquemine
J. R. Macredie, Plaquemine
George G. Keen, Houma
Chas. C. Savoie, Belle Rose
Frank H. Carruth, Jr., Lobdell
W. G. Taggart, L. S. U. Baton Rouge
Dr. I. L. Forbes, L. S. U. Baton Rouge
B. Thibaut, Napoleonville
E. P. Munson, Napoleonville
Robert C. Martin, Napoleonville
E. C. Niestrath, Belle Rose
M. J. Robe, Jr., Belle Rose
W. M. Grayson, Baton Rouge, U. S. D. A.
E. W. McNeil, Cinclare
Frank L. Barker, Lockport
Irving J. Legendre, Thibodeaux
M. J. Kahao, Jr., Kahns
W. S. Daubert, Cinclare
H. P. Allendorph, Lakeland
L. C. Bourgeois, Jr., Chamberlin
B. C. Devall, Chamberlin
Ivan M. Wilbert, Plaquemine
John A. Wilbert, Plaquemine
C. W. Stewart, Donaldsonville
R. F. Brou, Donaldsonville
A. J. Chenet, Tallieu
Michel F. Schexnayder, Welcome
Francis H. James, Donaldsonville
B. V. Mariouneaux, Cinclare
F. A. Vought, Houma
H. J. Jacobs, Mathews
Moise Hymel, Gramercy
E. J. Poche, Hester
Thomas Lowe, Thibodeaux
Frank Gaiennie, Thibodeaux
W. C. Byrne, New Orleans
Marcel J. Voorhies, New Orleans

Following some discussion of the original decision to alternate the monthly meetings between Donaldsonville, Plaquemine and Thibodaux, the original schedule of meetings was reaffirmed by voice vote.

In discussing the fertilizer situation it was brought out that Nitrate of Soda is being delivered on the basis of the amount used by each user in 1940-41.

The Secretary was requested to bring this to the attention of Washington, and endeavor to have the distribution of fertilizer so arranged that the individual needing fertilizer for the 1943 crop may be able to get it.

The recommendation of the Wage & Hour Division Committee for Sugar and Allied Industries that the minimum wage be 40c per hour was discussed. Mr. Barker, a member of the Wage & Hour Committee No. 50 interpreted the point of view of the Committee. He feels that the remunerations embraced under the term "perquisites" do not mean anything to an outsider. He feels that the industry should undertake to evaluate the perquisites in terms of dollars, as some other areas have done and as some individuals in this area have done. The method and values should be uniform.

A motion was offered seconded and unanimously approved that the President appoint a committee to confer with Dr. Harlan L. McCracken of L.S.U., to work out an evaluation of perquisites and report to this group at its next meeting.

The following committee was appointed.

Mr. E. W. McNeil, Chairman
Mr. George Pitcher
Mr. L. Bourgeois, Jr.

Mr. Wm. Grayson, AAA, Baton Rouge, explained the letter sent to the industry relative to the 1943 cultivating wages. He explained that because of uncertainties, a fair wage determination could not now be made. When a wage determination is finally made it will not be retroactive and an individual will have been deemed to have complied for purposes of conditional payments of his wage rates are not less than the 1942 rates. He must either pay the 1942 rates or whatever arrangements he made with his labor—whichever is higher.

The County Agents in the Sugar Parishes east of the Atchafalaya were declared honorary members of the Club and urged to attend all its meetings.

Western Club Meets

New Iberia, Louisiana
March 12th, 1943

The Louisiana Sugar Producers' Club (Western Division) was called to order at 1:30 P.M. by President R. O. Young.

Present were:

R. O. Young, President, Youngsville
G. L. Pace, Vice-President, New Iberia
M. V. Yarbrough, Youngsville
Harry D. Smedes, Cade
Stephen C. Munson, Jeanerette
J. P. Duhe, Jeanerette
A. V. Allain, Jeanerette
L. M. Folse, Franklin
P. J. Degravelles, County Agent, Franklin
Paul E. Moresi, Abbeville
C. B. Caldwell, Erath
W. C. Kemper, Franklin
W. F. Giles, Adeline
M. L. Marquette, Franklin
Howard Band, New Orleans
Harry L. Henslee, Youngsville
Alphonse Labiche, Breaux Bridge
Braman Beyt, St. Martinville
J. Eugene Caldwell, Abbeville
Rene L. Chauffe, Breaux Bridge
R. J. Gauthier, St. Martinville
Vincent Guidry, Breaux Bridge
James J. Ozenne, Breaux Bridge
John M. Caffery, Franklin
R. E. Flournoy, New Iberia
Leon L. Landry, New Iberia
Marcel J. Voorhies, New Orleans, La.

Secretary's report:

The President thanked County Agent P. J. DeGravelles for his presence and for his consistent interest in the problems of the group.

The Secretary reported on the first regular meeting of the Louisiana Sugar Producers' Club (Eastern Division) held in Plaquemine yesterday. The group was delighted to hear of the action of the Processors East of the Atchafalaya and hope that they will maintain the same enthusiasm which has prevailed with the Western group.

Mr. Kemper reported on his recent trip to Washington. He commented that Washington appears extremely worried over the labor situation and seems to be fully appreciative of the farm labor problem.

Dr. Young stated that some means must be found to induce Parish draft boards to defer Agricultural labor. He stated that we are going to be caught on the food question like we were militarily unless something is done about labor to produce the food.

Mr. Leon J. Landry made a plea that the industry redouble its efforts on scrap iron collection. He stated that the presence of scrap on the farms was still evident even to the casual observers.

Mr. Stephen C. Munson reported on a communication from the United States Engineers office which stated that the work of closing the Grand Avoyelles Cove on the West Protection Levee of the Atchafalaya had started.

Instead of having the secretary select growers from lists furnished by the County Agents to be invited as guests of the club it was decided that each factory invite its own guests. A factory is allowed three individuals at each luncheon meeting.

Contact Committee Meeting

A meeting of the Contact Committee of the American Sugar Cane League was held at Baton Rouge, Louisiana on February 17, 1943. Those present were:

Contact Committee:

Stephen C. Munson	F. A. Graugnard, Jr.
Bronier Thibaut	George Billeaud
H. K. Bubenzer	Horace Nelson
Emile A. Maier	A. A. Thibaut
Elliott Jones	Charles A. O'Brien

Houma Station:

George Arceneaux	E. K. Bynum
Eaton M. Summers	E. V. Abbott
Leo P. Hebert	L. G. Davidson
	J. W. Ingram

Experiment Station:

W. G. Taggart	I. L. Forbes
C. B. Gouaux	Harold T. Barr
E. C. Simon	C. W. Edgerton
S. K. Smith	R. A. Ballinger
R. K. Walker	M. B. Sturgis
P. H. Dunckelman	P. J. Mills
A. L. Dugas	Harold A. Kramer

Visitors:

J. C. Etheredge	H. A. LeBlanc
Marcel J. Voorhies	C. S. Harmount
R. T. Gibbens, Jr.	F. A. Swann
W. M. Grayson	Hebert Billeaud
James Turnbull	B. J. Smith
F. A. Robichaux	E. P. Munson
R. J. LeBlanc	R. F. Brou
L. J. Starr	A. C. Smith

The meeting was called to order by Mr. Stephen C. Munson, Chairman, who called on Mr. J. C. Etheredge to give his reports on "A Comparative Milling Test of Average and Trashy Sugar Cane" and Milling Results with 1/8" Grooving vs. 1/2" Grooving on Last Mill". Mr. Etheredge stated that he hoped to continue his work on the next crop, and that he also hoped to get information on the effect of burning trash from cane.

Mr. S. H. Smith presented a report on "Climatic Conditions Affecting the Sugar Cane Crop of 1942". This study was made in an effort to help determine why the sugar crop for 1942 was 20 per cent lower than had been expected.

A general report of the Plant Pathology Department was given by Dr. I. L. Forbes. In this report was included:

1. The result of field tests conducted at Baton Rouge during the past two years to determine the response of the commercial varieties and more promising seedlings to mosaic and red rot.
2. Results of tests to determine the relative susceptibility of commercial varieties and new seedlings to red rot.
3. Result of roguing for mosaic control in Co. 281 seed plots.

Mr. Marcel J. Voorhies was called on to give a report on the fertilizer situation for the current year. He explained that while fertilizer for the cane belt was made available by allocation from Washington last year, he had been advised that this year it would be made from Washington only after they had received instructions from the State War Board.

On motion made by Mr. Nelson and seconded by Mr. Jones and unanimously approved by the Committee, a copy of the following resolution, certified by Mr. Munson and Mr. Taggart, was given to Mr. Smith for immediate action:

> Resolved, That the State USDA War Board, through Mr. A. C. Smith, Acting Chairman, be requested to take the necessary steps to have sugarcane classified in Class A of Food Production Order No. 5.
>
> Be it further Resolved, That the State USDA War Board be asked to request that whatever nitrogenous fertilizer is made available to sugarcane be made available during February and March, 1943.
>
> Be it further Resolved, That the State USDA War Board ascertain for us (1) the procedure used by the distributors for the allocation of fertilizer to sugarcane, and (2) by distributors, the allotment and the amount distributed to sugarcane.

A report was given by Mr. E. C. Simon in which yield data and comparative sucrose analyses were given on varieties sent out to the test fields prior to the fall of 1942.

A report was given by Mr. C. B. Gouaux on thirteen sugarcane fertilizer result demonstrations conducted in the parishes of Assumption, St. Mary, St. Martin, St. Landry, Lafayette, Iberia and Vermilion during the season of 1942.

A report was given by Mr. A. L. Dugas on the sugarcane borer investigation in 1942 in which Cryolite was used. There was a full discussion of this work, and in answer to questions as to whether or not to dust, Mr. Dugas recommended that for large areas or entire plantations infested by first generation borers, first generation dusting should be done, and that in small areas or in areas which are a part of an infested area second generation dusting be done, but that where doubt exists as to whether or not to dust that either the county agent, the Baton Rouge Station, or the Houma Station be consulted.

Mr. Jones suggested that a report on the sugarcane borer and its control should be presented to the industry through the *Sugar Bulletin* just as soon as possible, and on motion duly made and seconded and

unanimously approved, it was agreed that this would be done.

Mr. Munson asked the Committee to consider action to hurry the allotment of materials for fifty dusting machines in the sugar area. Mr. Taggart suggested that a resolution be submitted through the Dean of the College of Agriculture to the State USDA War Board, and through the State Board to the War Production Board in Washington. A motion to this effect was made and seconded and passed without objection, and Mr. Marcel J. Voorhies was asked to prepare such a resolution and submit it to Dean J. G. Lee, Jr.

A report was given by Mr. Harold T. Barr on the use of the flame cultivator in controlling weeds and grasses in sugar cane.

Food at War

(*By A. W. Dykers*)

Food will win the War. This is the unanimous opinion of the experts in Washington. The following comments on the food situation have been gleaned from reports appearing in the press.

Canned Shortage and Lend-Lease

In 1942 we exported under lend-lease eight tenths of one percent of our canned vegetables—less than one can out of every 100—according to a recent press release of Lend-Lease Administrator Edward R. Stettinius, Jr.. One and seven-tenths percent of our canned fruits and fruit juices, which is less than two cans out of every 100, were also exported in 1942. In January 1943 lend-lease shipments of canned vegetables were one-third of the average monthly shipment of canned vegetables last year. In January 1943 lend-lease shipments of canned fruits and fruit juices were one-quarter of the average monthly shipment of canned fruits and fruit juices last year. The shortage of canned fruits and vegetables is due to a combination of heavy U. S. military requirements, increased consumer purchasing power in 1942, and limitations on the amount of tin-plate allocated for canning. Almost all of that part of the 1943 pack reserved for government purposes will go to U. S. armed forces, not to lend-lease.

Temporary Rations

The Office of Price Administration has announced that an employer who temporarily hires workmen for periods of less than 30 days, may now obtain the rationed foods needed to feed them by applying to the local War Price and Ration Board.

Food Deliveries Abroad

The FDA announced on March 24th that in January of this year it delivered 447,000,000 pounds of foodstuffs and other agricultural commodities for shipment to our allies. It was stated that 26,000,000 pounds of this total which included sugar, wheat, flour, evaporated milk, and soap were earmarked for North Africa, marking the first month that substantial deliveries for North Africa were recorded.

Blackstrap Ceilings

Amendment 130 to Supplemental Regulation No. 14 of G.M.P.R. which states that sellers of cane blackstrap molasses and beet molasses who choose to price carload lots on the basis of their March 1942 ceiling instead of using the regular ceiling price, must also price their less than carload lots by the same method, became effective March 19th. The Amendment also explains that if the regular ceiling is used for carload shipments this must also be used for the less than carload sales.

Paying Premiums

Packers of syrups and molasses, who previously paid premiums over existing market prices for certain items among these commodities because of special quality or flavor, were told on March 22nd by the Office of Price Administration that they might apply for permission to continue paying these premiums, with the understanding that the extra cost would not be allowed to be reflected in the packer's selling price.

OPA took this action through Amendment No. 4 to Maximum Price Regulation No. 291—Certain Syrups and Molasses. The amendment became effective on March 27th, 1943.

Cuban Crop Sold

President Batista, of Cuba, signed a decree on March 5th authorizing the Cuban Institute of Sugar Stabilization to sell the United States 2,700,000 short tons of the new Cuban crop at 2.65 cents a pound. Sugar production in Cuba this year is estimated at 3,225,000 short tons of which 2,700,000 tons is scheduled for the United States, 300,000 tons for export to other nations, and 225,000 tons for Cuban home consumption.

Lift Limitations

Lifting of limitations on shipment of the unsold portion of plantation granulated sugar and Louisiana crystals made from the 1942-43 sugar cane crop was announced recently in Washington by the Office of Price Administration. New Orleans refiners were authorized to ship confectioners' sugar to Eastern Tennessee and Eastern Kentucky.

FOR SALE
STRICTLY #1 Second Hand
Selected, thoroughly mended Blue Stripe Cuban
RAW SUGAR BAGS
QUALITY AND SERVICE GUARANTEED!
The HARDIN BAG & BURLAP CO., INC.
NEW ORLEANS, LA. U.S.A.

1942-43 PRODUCTION RECORD

The following figures on the 1942-43 Louisiana grinding campaign have been compiled from signed reports received by the American Sugar Cane League from the 66 mills in Louisiana that participated in the grinding season just completed. These mills ground a total of 4,791,134 tons of cane.

Raw sugar produced	611,603,511	pounds raw value
Clarified sugar produced	8,466,598	" " "
Turbinado sugar produced	51,779,627	" " "
Granulated sugar produced	102,363,996	" " "
Washed-Raw sugar produced	17,387,785	" " "
Other Sugar produced	3,171,802	" " "
Sugar estimated in Massecuite	1,887,458	" " "
Total sugar produced (raw value)	796,660,777	pounds or 398,330 short tons.
Syrup produced by factories equipped to make sugar	1,802,624	gallons
1st Molasses ditto	3,301,640	"
2nd Molasses ditto	4,420,460	"
Blackstrap Molasses ditto	23,103,373	"
Pounds of 96 test sugar recoverable in syrup, first and second molasses	28,829,730	pounds

Wage Rates

Order of Approval for Decrease in Wage Rates Below the Highest Rate Paid Between January 1, 1942 and September 15, 1942, in the Production, Cultivation, or Harvesting of Sugar Beets or Sugarcane

By virtue of the authority vested in the Secretary of Agriculture by § § 4001.5c and 4001.5d of the regulations promulgated by the Director of Economic Stabilization, with the approval of the President, dated November 30, 1942 (7 F.R. 10024), the following order of approval is hereby promulgated:

Approval is hereby given to the payment of wages by the employer to agricultural labor employed on the farm in the production, cultivation, or harvesting of sugar beets or sugarcane, below the highest wage paid for such work between January 1, 1942, and September 15, 1942, provided such wages are not less than the wages required to be paid for such work in order for the producer to qualify for conditional payments made pursuant to Title III of the Sugar Act of 1937, as amended.

Done at Washington, D. C., this 15th day of February 1943. Witness my hand and the seal of the Department of Agriculture.

CLAUDE R. WICKARD,
Secretary of Agriculture.

[SEAL]

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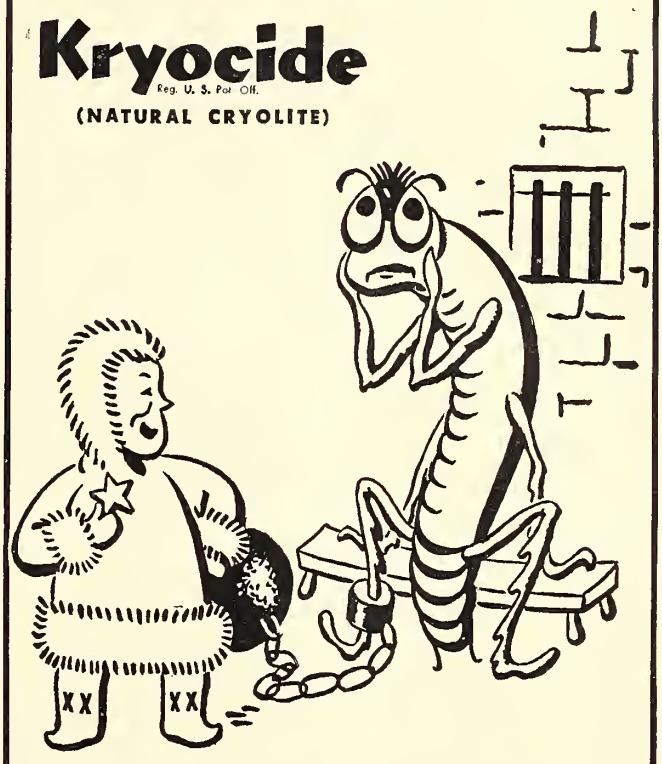

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THE SUGAR BULLETIN

Entered as second-class matter April 13, 1925, at the post office at New Orleans, La., under Act of March 6, 1879.

We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., APRIL 15, 1943 No. 14

Progress Report of League Activities

In addition to its general routine activities planned and designed to be of utmost service and assistance to its membership, the American Sugar Cane League published in the Sugar Bulletin of January 15, 1943, a Seven-Point Program including the endeavors which it would particularly stress in 1943.

We quote Point Six: "In view of the production goals and the need for more sugar produced on the continent, arrangements are being made for ample supplies of fertilizer. Approximately 8,000 tons of Cyanamid have already been made available to sugarcane growers and there is a possibility of obtaining a few more tons. Nitrate of soda is expected to be available earlier and in larger quantities than last year, but growers are urged to place their orders for fertilizer immediately so that there can be a full fertilization and cultivation of the 1943 crop. Growers must order fertilizer through the usual distributors or local agents."

All of the activities of the League (Washington and New Orleans offices) with respect to securing sufficient fertilizer, were closely coordinated with the Louisiana distributors, the Louisiana U. S. D. A. State War Board, our Senators and Representatives, and the Food Production Administration of WPB.

On February 9, the Washington office advised the New Orleans Office that the Office of Agricultural War Relations was dependent upon State War Boards for information and guidance with respect to fertilizer distribution. On February 16 the New Orleans office conferred with the Louisiana U. S. D. A. War Board at Baton Rouge with respect to the fertilizer needs of the sugar industry, and pointed out that a large number of producers were reporting inability to secure fertilizer from the distributors. The State War Board, through its Parish organizations, made a survey of the fertilizer situation and found, by comparing representative sugar parishes and representative cotton parishes, that the sugar parishes had received only 47.46% of their last year's receipts of fertilizers to this date, and that the representative cotton parishes had received 278.1% of their fertilizer receipts of last year up to date. The WPB in Washington was advised of this situation by the State War Board.

The Washington and New Orleans offices continued their demands for fertilizer and took every possible step to determine the exact requirements of the industry through various surveys of growers.

We are glad to report that the Cyanamid Company, when it has delivered the 1500 tons allocated a few days ago, will have delivered to the cane growers a total of 13,000 tons. This is only about 2,000 tons short of their maximum delivery for the cane belt.

We have also been allocated Sodium Nitrate, Ammonium Sulphate, and a certain quantity of mixed fertilizer.

We are assured now that the needs of the industry will be met even if it is necessary to allocate an additional tonnage of Sodium Nitrate, which we understand is presently in Southern ports.

Point No. Seven: "Farm machinery is needed more than ever because of labor shortages and the League urges WPB to permit production of new mechanical implements and to make them available to farmers. Wherever farm machinery is mounted on rubber, farmers should be granted priority on tires to keep these implements operating at greatest efficiency."

The activities of the Washington office, in cooperation with our Senators, should be credited with a decided improvement in the flow of machinery, especially of the specialized type of sugarcane machinery, into the sugar belt. Through the work of the State and Federal Experiment Station it became advisable to plan the control of cane borers by dusting. However the dusting machinery was not available. Through the efforts of the League and in close cooperation with the Dean of the College of Agriculture and the U. S. D. A. State War Board, we are now assured a reasonable number of borer dusting machines for the borer control work this spring.

THE
SUGAR BULLETIN
414 Whitney Bldg., New Orleans
Marcel J. Voorhies, Editor
Issued on the 1st and 15th of each month. Official Organ of the American Sugar Cane League of the U. S. A.
in which are consolidated
The Louisiana Sugar Planters' Assn.
The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
Subscription Price, 50 Cents per Year.

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Official Prices for the 1942-43 Season

The following information covering the 1942-43 Cane Purchase Contract period, October 9th, 1942 through April 1st, 1943, is from the records of the *Cane Products Trade Association, Inc.*

Raw (96 test delivered New Orleans) 25 weekly averages issued as follows:
All 3.73 ceiling.

Blackstrap (Bulk f.o.b. Plantation) 22 weekly averages issued as follows:

November 5th 17.28; November 12th and 19th 18.00; November 26th, 17.85; December 3rd and 10th 17.83; December 17th 17.67; December 24th 17.50; December 31st 17.60; January 7th 17.50; January 14th 17.58; January 21st 17.50; January 28th, February 4th, February 11th, 18th, 25th, March 4th, 11th, 18th, 25th, and April 1st 18.00

Official Average Prices For The Season:

Raws (96 test delivered New Orleans) 3.73
Blackstrap (Bulk f.o.b. Plantation) 17.82455
Standard Cane: $3.833 per ton.
Molasses Bonus: 31.93 cents per ton of actual cane.

Sugarcane Borer Losses, and Control by Dusting with Cryolite*

(*By A. L. Dugas*)

A statement by Mr. Wallace C. Kemper, President of the American Sugar Cane League:

"Through the able work of Mr. A. L. Dugas, Assistant Entomologist at the Agricultural Experiment Station of LSU, it was conclusively proven last year that the dusting of sugar cane with synthetic Cryolite controlled, to a marked degree, the ravages of cane borers. Our sugar cane growers have never used dusting machines. When we attempted to place orders for the dusting machines, we found that they, like other farm equipment, were under complete control of WPB, and that only 49 dusting machines had been authorized for distribution in the State of Louisiana for the year 1943. Since the cotton farmers had the background of previously using dusting machines, and since sugar cane growers had never used that equipment, none of the 49 was available for our growers.

"Mr. Dugas then prepared a thorough report outlining the imperative need of dusting machines in the sugar cane area. This report was augmented by statements from Mr. W. G. Taggart and Dean J. G. Lee. The League Contact Committee, under the Chairmanship of S. C. Munson passed approving resolutions, and the State War Board added its recommendations.

"We are glad to report that an additional 223 dusting machines have been authorized by WPB for the State of Louisiana. The portion of that total which will go to sugar cane growers has not yet been determined, but we are confident that those who desire to purchase dusting machines will now find it possible to obtain them. It is a pleasure to make this announcement to our growers, not only because we feel these dusting machines will materially increase our sugar production, but because it is exemplary of the results which can be obtained when everyone works together. We cannot commend too highly Messrs. Dugas, Taggart and Lee of LSU, nor the League's members who all devoted the necessary time and effort to this work."

Since the losses from borer injury to all crops attacked in Louisiana amounts to approximately $5,000,000 annually, and the damage to the sugarcane crop alone in decreased yields was about $3,500,000 in 1942, with prospects of an increased damage this year, it seems imperative that a borer control program be instituted immediately. Very little has been done about this important problem in the past because of its lack of a satisfactory control measure. Now that a worthy and practical control has been found the sugarcane growers of Louisiana have become increasingly interested in a unified effort to fight the borer dusting large areas with cryolite in order to save millions of pounds of sugar, so important in our war production program.

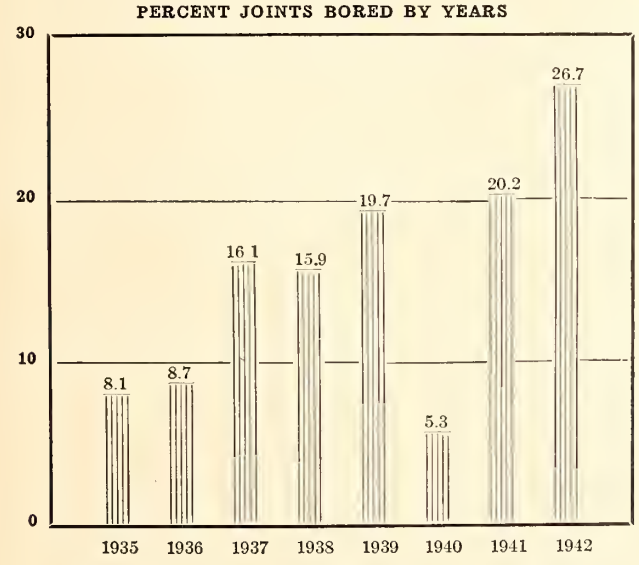
Losses Caused by Sugarcane Borer to Sugarcane

Naturally, it is important that the losses caused by the borer be considered before a control program be instituted. Even more important than the type of damage inflicted is the present status of the borer infestation, and the prospective infestation of the coming year, which directly affects the amount of loss.

The injury by the sugarcane borer to sugarcane results in (1) dead hearts, or dying of young plants,

(2) Boring and tunneling of joints, and dead tops in slightly older cane, (3) broken-over stalks, (4) decrease in germination and vigor of seed cane, and finally (5) substantial loss in yield of cane and of sugar. The measure of such losses at the present time is the percentage of joints bored, the criterion used in an annual survey to determine borer losses.

The following graph shows that the borer infestation is definitely on the increase, and that with 26.7 per cent of the joints bored in 1942, the infestation was considerably higher than it has been since this survey was inaugurated in 1935. It is estimated that the monetary loss to the sugarcane industry from borer damage in 1942 amounted to approximately $3,500,000, in decreased yields.



Borer infestation, as measured by per cent joints bored, 1935 to 1942 inclusive.

Considering the fact that borer damage was quite widespread over the infested areas, and that this winter has been very favorable for borer survival, it is logical to presume that the losses caused by borers will be even greater in 1943. Many plantations reported losses of as much as five tons per acre over their entire acreage this past year, and many small growers estimated their loss at one-half the crop, failing to make standard sucrose at any time during the season. Of course, with a considerable build up of the borer population this coming year, the number of farms reporting such losses should materially increase, and the damage should become more widespread in the cane area. Perhaps a more definite idea of the losses caused by borers may be obtained from the results of detailed control experiments conducted last season. A discussion of these tests and of other work will follow.

Results of Experiment Work on the Control of the Borer by Dusting with Cryolite

Since 1937, the Louisiana Agricultural Experiment Station and the Bureau of Entomology and Plant Quarantine, of the United States Department of Agriculture, have cooperated in investigations on the uses of various insecticides for the control of the sugarcane borer in Louisiana. It has been proved without any reasonable doubt that a 90 to 97 per cent control of first generation borers may be obtained by dusting four times at weekly intervals, using cryolite at the rate of about eight pounds per acre per application. It has also been found that the area dusted for first generation control should be sufficiently large to prevent a reinfestation by second generation borers from adjoining infested areas. In view of the fact that it would be recommended that first generation dusting be done in a unified dusting program over a large area, it would be advantageous to all of the growers involved, to solicit the participation of the largest number of growers possible in this program.

Further, it has been found that the dusting of second generation borers is applicable to small areas in that the harvest time control is not affected to any substantial degree by reinfestation from adjacent areas. Dusting of the second generation is being done to protect seed cane plots and small, heavily infested areas. With the object of securing definite figures on the amount of gain to be expected from cryolite dusting for borer control, the Louisiana Agricultural Experiment Station conducted several small, randomized-plot tests in three different varieties in 1942. The borer infestation, weight of cane, and sugar analysis, were obtained in all cases.

In the following tabulation, (table I), it is significant that all of the cryolite treatments resulted in an excellent control; whereas sulphur accounted for an increase in borer damage. It should be explained that sulphur has a lethal and repellant effect on Trichogramma, the native egg parasite of the borer, as well as a repellant action on the Argentine ant, which has been observed to be an important peeditor of young borers and borer eggs. Thus, the sulphur treated plots serve to illustrate the amount of loss to be expected from a heavier borer infestation than that which actually resulted in the untreated plots, and also shows the approximate good that the natural enemies of this pest are doing. Since cryolite at 10 lbs. per acre is taken as the standard treatment, the gains in value of cane and sugar over the check and sulphur plots are based on that treatment, comparisons with other treatments may be easily made from the table.

In general, the gain in value of cane in the cryolite treated plots over the untreated, after deducting $5.50 as the cost of material and application, ranged from $15.57 to $36.08 per acre; and over the sulphur plots, from $29.30 to $48.77. In value of sugar per acre, the gain over the checks ranged from $24.75 to $50.95, and from $38.69 to $71.96 over the sulphur plots. It is evident that borers may account for a loss of as much as ten tons of cane per acre, and from 1000 to 1500 lbs. of sugar per acre. Losses in many fields in 1942 were far greater than the above figures.

It becomes significant that a gain of only one ton of cane per acre would pay for the dusting. The borer infestation need not be very heavy for control to result in such a nominal gain.

Practical Application of Cane Dusting

Sugarcane dusting for borer control is definitely beyond the experimental stage. Approximately 1200 acres were dusted in 1942. On Reserve plantation, 613 acres were dusted with cryolite, and the remaining acreage rogued thoroughly. This particular case offers the best example of the results that could be expected from a unified dusting program, covering a greater part of the infested area.

On Reserve plantation, the 1942 yield per acre was increased nearly 7 tons over that in 1941. In the same part of the field where the yield was down to 8 tons per acre and the sucrose about eight in 1941, the yield this past year amounted to twenty-three tons, and the sucrose about twelve or standard, following a dusting program.

Table I

Effectiveness of cryolite and sulphur against the sugarcane borer in various experiments, averages of fine replications in each test, 1942.

Location and Variety	Treatment A Cryolite 10 lbs. per acre	B Cryolite 12 lbs. per acre	D Cryolite-pyrax 20 lbs. 1 side row	E Cryolite-pyrax 20 lbs. 2 side rows	C Check No Treatment	F Sulphur
1—Oakbluff—C. P. 20-103 Plant						
Sucrose	14.40	14.04	13.62	14.14	12.46	11.40
Yield: Cane, tons per acre	23.52	24.19	23.18	22.51	17.14	14.11
Standard cane, tons per acre	27.99	27.82	25.33	26.11	17.14	13.83
Sugar lbs. per acre	3740.00	3806.54	3530.69	3590.50	2328.48	1697.47
Value: Cane per acre	107.29	106.64	98.64	100.09	65.71	53.02
Sugar per acre	139.50	141.98	131.69	133.93	86.85	63.32
Gain: [2]						
A over value of cane	------	------	------	------	41.58	54.27
C & F value of sugar	------	------	------	------	52.65	76.18
2—Campertown—C. P. 29-103 plant						
Sucrose	15.16	15.28	15.68	14.37	14.01	13.12
Yield: Cane per acre, tons	30.24	30.24	27.22	30.91	25.87	25.20
Standard cane	38.10	38.40	35.66	36.47	29.75	26.71
Sugar per acre, lbs.	5438.50	5468.74	5046.05	5157.94	4077.70	3870.72
Value: Cane per acre	146.05	147.20	136.70	139.80	114.04	102.39
Sugar per acre,	202.86	203.98	188.22	192.39	152.10	144.38
Gain: Value of cane	------	------	------	------	32.01	43.66
C & F: value of sugar	------	------	------	------	50.76	58.48
3—Belleview C. P. 29-103 plant						
Sucrose	15.83	15.90	15.81	15.94	15.41	15.09
Yield: Cane per acre, tons	20.83	20.16	20.16	20.83	16.46	14.45
Standard cane	27.70	27.01	26.81	27.91	21.23	18.06
Sugar per acre, lbs.	3793.78	3733.63	3769.92	3866.02	2882.88	2427.26
Value: Cane per acre	106.13	103.54	102.77	106.99	81.38	97.66
Sugar per acre	141.51	139.26	140.62	144.20	107.53	90.54
Gain: Value of cane	------	------	------	------	24.80	36.95
C & F: Value of sugar	------	------	------	------	33.98	50.97
4—Belleview Co. 290 plant						
Sucrose	14.18	13.74	13.90	12.82	12.70	12.70
Yield: Cane per acre, tons	25.87	25.87	24.86	24.86	20.50	18.14
Standard cane	30.01	28.97	28.34	28.09	20.91	18.14
Sugar per acre, lbs.	4551.12	4544.06	4304.83	4308.86	3037.78	2570.06
Value: Cane per acre	115.04	111.06	108.63	107.67	80.16	69.54
Sugar per acre	169.76	169.49	160.57	160.72	113.31	95.86
Gain: Value of cane	------	------	------	------	34.88	45.50
A over value of sugar	------	------	------	------	56.45	73.98
C & F	------	------	------	------	------	------
5—Oxford—C. P. 29-116 plant						
Sucrose	13.79	14.05	13.83	13.79	12.15	11.33
Yield: Cane per acre, tons	32.26	34.27	33.60	32.59	30.58	23.86
Standard cane	36.13	39.41	37.97	36.50	30.58	22.91
Sugar per acre, lbs.	4836.38	5164.32	4995.31	4016.02	3912.02	2759.90
Value: Cane per acre	138.50	151.07	145.56	139.92	117.22	87.83
Sugar per acre	180.40	192.63	186.33	183.37	145.92	102.94
Gain: Value of cane	------	------	------	------	21.28	50.67
A over value of sugar	------	------	------	------	34.48	77.46
C & F	------	------	------	------	------	------
6—Belleview—C. P. 29-116 2nd stubble						
Sucrose	12.59	12.75	12.58	12.65	10.44	9.11
Yield: cane per acre, tons	13.10	12.77	13.10	13.44	9.74	7.73
Standard cane	13.10	13.03	13.10	13.57	7.60	4.02
Sugar per acre, lbs.	1881.26	1857.74	1837.92	1947.12	1070.50	696.53
Value: Cane per acre	50.21	49.94	50.21	52.02	29.14	15.41
Sugar per acre	70.17	69.29	68.55	72.63	39.93	25.98
Gain: Value of cane	------	------	------	------	21.67	34.80
A over value of sugar	------	------	------	------	30.34	44.19
C & F	------	------	------	------	------	------

[1]Sulphur is repellant and lethal to trichogramma, the native egg parasite of the sugarcane borer and thereby results in an increased damage. By its application, the losses at a higher level of borer infestation, are revealed.

[2]An estimated $5.50 should be deducted from the value of gains to take care of the cost of cryolite and its application. Value of cane is figured at $3.83 1/3 per ton. Molasses payment and government benefit payment not included.

Value of Sugar at $3.73.

With a good dusting program established in the cane area, together with the use of other recommendations for control, there is no doubt that the damage by borers could be reduced to a very minimum.

Naturally, the successful establishment of such a program depends upon the securing of a sufficient number of power machines, as well as a limited number of hand guns, to allow the participation of a maximum number of growers in the program.

A. L. DUGAS,
Assistant Entomologist, La. Agricultural Experiment Station.

*The Louisiana Agricultural Experiment Station and the Federal Station at Houma conduct this survey cooperatively each year.

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The Variety Census for 1942

(By George Arceneaux, Agronomist, Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Department of Agriculture)

The following table shows the distribution of varietal acreages in the 3 main areas of the Louisiana Sugarcane District during 1942 and gives average increase as compared with 1941. The data were compiled from information supplied by county agents of the area and in some instances by growers. The percentage of the state acreage in each of the 3 areas as given is based on information supplied by Mr. W. M. Grayson of the Agricultural Adjustment Administration. Grateful acknowledgment is made of the prompt and valuable cooperation received in this connection from individuals and agencies involved.

It will be noted that Co. 290 and C.P. 29/320 were the two most extensively cultivated varieties during 1942. A large proportion of the Co. 290 acreage was found in parishes west of the Atchafalaya where, on some of the plantations, the variety is cultivated to the practical exclusion of all others. Much of the C.P. 29/320 acreage on the other hand is concentrated in the parishes of Iberville, West Baton Rouge and Pointe Coupee where this variety has enjoyed considerable popularity because of its early maturity and relatively satisfactory handling qualities.

The localized distribution of extensive acreages devoted to these two varieties should cause some apprehension in view of appreciable declines in yield, especially in stubble crops, suffered by them during recent years. While recessions in this regard have not reached disastrous proportions, it is felt that due consideration should be given to dangers involved and attention should be given to the possibility of partial replacement by appropriate varieties.

Percent distribution of sugarcane acreage according to variety in the 3 principal areas of the Louisiana Sugar District

Area	Variety								
	Co. 290	C.P. 29/320	C.P. 28/19	Co. 281	C.P. 29/116	C.P. 28/11	C.P. 29/103	Other Varieties	Percent of State Acreage
1942 Crop									
Southeastern[1]	21.32	27.14	17.85	15.40	4.91	8.05	3.49	1.84	41.83
Southwestern[2]	69.33	5.35	1.69	0.57	15.35	0.35	6.28	1.08	38.95
Northern[3]	3.33	50.27	13.21	13.53	1.96	9.40	2.66	5.64	16.90
17 Parishes	37.35	22.45	10.60	9.17	8.56	5.21	4.46	2.20	97.68
Average increase (+) or decrease (–) in percent acreage as compared with 1941									
17 Parishes	–2.12	–0.54	–1.96	–3.06	+2.00	+1.96	+3.04	+0.68	

[1] Parishes of St. John, St. Charles, St. James, Ascension, Assumption, Lafourche and Terrebonne.

[2] Parishes of St. Mary, Iberia, Lafayette, Vermilion, St. Martin and St. Landry.

[3] Parishes of Iberville, West Baton Rouge, Pointe Coupee and Avoyelles.

The performance so far of the newly released variety C.P. 34/120, amply justifies the variety's extensive substitution for C.P. 29/320 as soon as seed supplies permit. C.P. 34/120 should also extensively replace Co. 290 in parishes east of the Atchafalaya and to a lesser extent in other parts of the Sugarcane District. Minor substitution of C.P. 29/116 for Co. 290 in Iberia, St. Mary, St. Martin and other western parishes can be readily justified as a measure of varietal diversification in precaution against possible stubble failures of an aggravated nature with Co. 290.

It will be noted that the most important decreases in relative acreage occurred with Co. 281, Co. 290, and C.P. 28/19, while C.P. 29/103, C.P. 29/116, and C.P. 28/11 registered the most important gains. The acreage listed under "other varieties" was devoted, in the main, to C.P. 29/120 and 33/243. The former is gaining somewhat in popularity but it appears doubtful that 33/243 will ever become an important variety.

Western Club Meets

The regular monthly meeting of the Louisiana Sugar Producers' Club (Western Division) was held on April 2nd in New Iberia, La. Those present were:

Dr. R. O. Young, Pres.	Youngsville Sugar Factory
L. M. Folse	Oaklawn Sugar Factory
V. H. Eckard	Abbeville
J. Eugene Caldwell	Vermilion Sugar Factory
Paul G. Moresi	Erath Sugar Factory
W. M. Hall	Erath Sugar Factory
Geo. L. Billeaud	Billeaud Sugar Factory
Mike Marquette	Oaklawn Sugar Factory
Harry D. Smedes	Oasis Sugar Factory
W. F. Giles	Adeline, La.
Dr. E. V. Abbott	Federal Sugar Station, Houma
P. J. DeGravelles	Co. Agent St. Mary Parish
Hugh Junea	Franklin, La.
Jules Burguieres	Cypremort Sugar Factory
G. L. Pace	Iberia Sugar Coop.
John M. Caffery	Columbia Sugar Factory
George M. Germany	Loreauville, La.
Leon J. Landry	New Iberia, La.
Serge Golodetz	Orange Grove Sugar Factory
Frank Bacque	Youngsville, La.
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Rene Chauffe	Ruth Sugar Factory
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Geo. Blumenthal	Vida Sugar Factory
Harry L. Hinslee	Youngsville Sugar Factory
Clesme Menard	Youngsville, La.
Marcel J. Voorhies	New Orleans, La.

Dr. Young called the meeting to order at 1:30 P.M. and expressed disappointment in the comparatively low attendance. He urged the processors to attend the next meeting, scheduled for May 7th, and to bring their farmer guests with them. Dr. Young pointed out that in these times of complicated problems it is very important for the processors and sugarcane farmers to jointly discuss their many difficulties so that each may have a clearer understanding of the problems confronting the other.

Mr. Geo. L. Billeaud reviewed the incentive payment plan recently proposed for the sugar beet farmers by the U. S. Department of Agriculture, and discussed the efforts of Senator John H. Overton to secure similar treatment for the sugarcane farmers.

The secretary reported on the fertilizer situation, quoting several telegrams showing the number of tons of fertilizer allotted to the State and the fact that distributors had been requested to earmark fifty percent of their entire April allocation for sugar.

Mr. Hugh Junea, a farmer guest from St. Mary Parish, discussed the cultivation of sugarcane, stressing the necessity for proper drainage.

Dr. E. V. Abbott, of the Houma Federal Field Sugar Station, briefly discussed the varietal work being done at the Houma Station. He told the meeting that from ten to fifteen thousand seedlings are now handled there annually.

The meeting adjourned at 2:30 P.M.

Raw Sugar Bag Situation is Serious and May become Critical

Importation of gunny sacks (Raw Sugar Bags) for packing raw sugar has been indefinitely suspended as a result of increased demands for shipping space essential for vitally needed war material, the War Production Board announced on February 26th, with the Conservation Division explaining that increased emphasis is being given to its program for conserving and recovering as many bags as will be suitable for re-use.

Imports of more new bags cannot be made until the shipping situation from India eases. All available bags are now in the hemisphere. The service of the present supply of raw sugar bags must be extended to the limit. It is necessary that they make as many trips as possible between producer and refiner.

We must place special emphasis upon the correct and careful handling, opening and emptying of raw sugar bags. Diligent care in drawing sugar samples must be insisted upon. Careful handling affording every practical protection to the bag in transit and in storage (full and empty) so that unnecessary wear may be reduced to the very minimum is urged.

All bags should be carefully and thoroughly repaired before re-use. And new bags should not be used when repossessed bags are available because new bags can be kept for longer periods in the inventory.

The important thing is that we must have raw sugar bags (suggested substitutes have not yet been thoroughly proven), and the present supply appears to be the only supply for the duration of the war.

Raw sugar bags are available and every effort should be made to obtain our bag requirements well in advance of the harvest season.

Food at War

(By A. W. Dykers)

Food will win the War. This is the unanimous opinion of the experts in Washington. The following comments on the food situation have been gleaned from reports appearing in the press.

Millions of Books

Printing and mailing seven thousand five hundred copies of the SUGAR BULLETIN twice a month seem to us to be a pretty large job but Mr. A. E. Geigengack, head of the Government printing office, has a slightly larger one. Testifying before the House Appropriations Committee recently Mr. Giegengack stated that he printed and distributed 190,000,000 copies of War Ration Book number one, 150,000,000 copies of Book number two, and 150,000,000 copies of the new Book number three, which has not yet been issued to the public. The printing costs alone for these books amounted to about $2,500,000, and 19,000,000 pounds of paper, including the forms to go with the books, were used.

Food Released

About 12,000,000 cases of canned fruits, juices and vegetables have been released by the army to the Food Distribution Administration to meet emergency food situations that may arise in the civilian population later this year. This announcement was made on March 30th by the agricultural department. It was also stated that more than 2,000,000 additional cases of canned fruits and vegetables will be released soon by the FDA to augment civilian supplies. Release of the canned goods by the army was made possible by the approach of the 1943 packing season and the resulting new supplies.

Bahama Laborers

The Agricultural Labor Administration has announced that, in response to an appeal made by the Duke of Windsor, governor of the Bahamas, 5,000 agricultural workers have been recruited in Bahama for work in Florida. These agricultural laborers, some of whom are to work in the Florida cane fields, were scheduled to begin arriving in this country during the second week of April.

One Way of Eating

An Associated Press dispatch to the *New Orleans Times-Picayune* from Ossining, N. Y. the home of Sing-Sing, gives one solution to the meal problem. Prison officials have stated that there will be no food rationing for "the last mile". The custom of permitting a condemned man to select all items on the menu of his last two meals, started more than half a century ago, will continue, rationing or no rationing, according to the dispatch.

Pressure Cookers

The distribution of 150,000 pressure cookers to aid in canning victory garden crops will be undertaken shortly by the USDA war boards, according to a recent announcement from Washington. Housewives, home canners, or groups of persons interested in canning, may apply to their county war boards for certificates to purchase the cookers, and they may be allowed to do so. Southern states, where canning equipment will be needed earlier than in Northern states, will receive the pressure cookers first. It was also stated that 36,000,000 glass jar tops will be made available this year to aid in the canning operations. This compares with 23 million tops last year and a normal year's supply of about 15,000,000.

Cuban Prospects

The April issue of SUGAR states that there is plenty of cane available in Cuba to produce the 3,225,000 short tons of sugar authorized by the Cuban Government this year despite the very dry growing season, and that there are enough sugar bags in sight to take care of the crop requirements. Blackstrap production in Cuba is estimated this year at 140,000,000 gallons. From this production 20,000,000 gallons must be turned over to the Defense Supply Corporation of the United States to repay a loan by the D.S.C., and 75,000,000 gallons will be reserved for domestic requirements. This will leave only about 45,000,000 gallons of Cuban Blackstrap for other purposes.

Labor Shortage

Sugar production in Mexico this year is estimated at 500,000 tons which is the largest crop ever produced there. It is believed that 100,000 tons of this production will be available for export. A report to SUGAR stating that several factories in Vera Cruz have been complaining of a shortage of harvesting labor for the current crop, due to the number of workers who have gone to take up industrial employment elsewhere in Mexico at higher wages, will have a familar ring to our Louisiana readers.

Keeping Family Ties

Coffee and sugar have been practically blood relatives for a very long time and J. Aron & Co. apparently intend to do what they can to keep up this relationship. The *Times-Picayune* reported recently that the Supreme sugar refinery of J. Aron & Co., is now turning out coffee, or a fair facsimile thereof, by the carload. The "coffee" is roasted rye that is calculated to prolong the life of a pound of coffee by mixing with the real thing. However, if you wish to do so, you can have a cup of rye.

MEETING SCHEDULED

The Contact Committee of the American Sugar Cane League will meet in the Agricultural Extension Auditorium with members of Experiment Station Staff on Tuesday, April 20th, at 10:00 A.M. for an all day program.

Plenty of Wheat and Cotton

The United States had a two year supply of wheat on hand January 1st of this year, according to a report made in Washington recently by Secretary of Agriculture Wickard. Mr. Wickard told the House Appropriations Committee that the 1,155,000,000 bushels of wheat on hand at that time were sufficient to last about two years under present plans. Mr. Wickard also stated that 16,569,379 bales of cotton were in storage in this country on January 31st and he estimated that this was sufficient to last about 17 months.

Potato Black Market

Connecticut and the East is facing a potato shortage. This information was contained in a recent report from Hartford, Connecticut, which stated that the supply of native potatoes in Connecticut was nearly exhausted. Blame for this shortage is placed by the O.P.A. on the fact that Maine potatoes are hard to get because of transportation difficulties, and, believe it or not, a potato *Black Market*. Other press reports indicate that the New York City area is also very short of potatoes. Transportation difficulties are blamed for this difficulty also.

Ration Stamps Needed

The Office of Price Administration amended its regulations on March 12th to allow consumers to bring sugar into the United States from foreign countries. The catch to this permission is that ration stamps or certificates must be surrendered to the collector of customs when the sugar is brought in. Persons living close to the borders will, therefore, obtain no advantage from the new amendment. Coffee is being handled in the same manner.

Meat Bargains

An amendment to Ration Order #16 covering the sale of meats makes it mandatory for sellers who reduce point values to avoid spoilage, to also drop the money price of the meat at least 25 per cent below its ceiling. The order states that a reduction in the money up to 50%, and a point value reduction up to 25% is permissible. Reports on all clearance sales must be filed by meat retailers with their ration boards and the reduced point and money values must be posted.

Small Farmers Excused

Small farmers who sell less than $75.00 worth of food a month were exempted from price controls on fresh cabbages, peas, snap beans, tomatoes, carrots, spinach, and lettuce, in a ruling handed down by the Office of Price Administration on April 8th.

More Sugar

The Office of Price Administration announced on April 8th that arrangements had been made to import 200,000 additional tons of Cuban sugar to be used mostly for home canning purposes, and that housewives would be able to get sugar for home canning this year without ration coupon penalties. It was also stated that an extra sugar allotment might be granted to hotels, restaurants, and other public eating places that make their own pastries, to relieve an existing shortage. It is not believed that individual allotments will be increased.

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THE SUGAR BULLETIN

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A Statement By President Kemper

Statement of W. C. Kemper, President of The American Sugar Cane League of the U. S. A., Inc., at the Louisiana Farm and Industry Conference Sponsored by The National Association of Manufacturers at Baton Rouge April 13 and 14, 1943.

I would like to make a statement to you gentlemen about the situation which confronts Louisiana sugar cane growers with regard to parity. All of you know that sugar was the first product rationed by OPA. You probably know, also, that a ceiling price was set on raw sugar in August, 1941, some 5 months prior to the passage of the Price Control Bill. In that *1941* crop year the Department of Agriculture figured that the beet growers of the United States received 103% of parity for their 1941 production and the cane growers of Louisiana received 90% of parity. For the *1942* season the same discrepancy occurred. Leon Henderson, the Administrator of OPA, stated in a letter to Senator Ellender of Louisiana, dated January 8, 1943:

"The average returns to growers of sugar beets will be . . . 108.6% of parity. The average return on continental sugar cane to independent growers . . . will be . . . 94.8% of parity."

Our industry has continually called to the attention of the various governmental administrators that sugar beet and sugar cane growers should be treated equally. Our U. S. Senators have addressed various officials of the government, calling their attention to the fact that it has always been Congressional policy to accord equal treatment to sugar beet and sugar cane growers.

You gentlemen know that the Price Control Bill, under which the OPA operates, contains a provision which states that no price ceiling can be placed on a manufactured article which will result in less than parity to the farmer producing the raw material for that manufactured article. This has been violated by the ceiling price of raw sugar. Mr. Henderson's excuse, in that same letter of January 8, 1943, for according less than parity to sugar cane growers (after his mention of 108% parity for beet growers and 94% for cane growers) was:

"It thus appears that on the average, sugarcane and beet growers in the continental U. S. are receiving at least 105% of parity, even though sugar cane producers are receiving somewhat less than parity."

Further on in Mr. Henderson's letter, he refers to Senator Ellender's specific suggestion that the price of sugar be raised to accord parity to Louisiana cane farmers. He says: "But if the OPA should take this action, it is clear that the producers of sugar beets, who are already receiving more than parity would, as a result of the price rise, receive considerably more than parity. There appears to be nothing in the Emergency Price Control Act, or discussions of that Act, which would justify the Office of Price Administration in setting the ceiling at so high a level."

That seems most peculiar to us, but it is even more difficult to understand in view of the fact that on February 10, 1943, the Department of Agriculture announced a program to give sugar beet growers an incentive payment of $1.50 per ton of beets. I quote from the Department of Agriculture release:

"War conditions have made it necessary for the United States to rely more heavily than heretofore upon continental sources of sugar, particularly upon continentally produced beet sugar. As a part of its program to assist sugar-beet producers and to assure a sufficient supply of sugar during the remainder of 1943 and during 1944, the Department of Agriculture has announced and will carry out, through the Commodity Credit Corporation, a sugar beet price-support and distribution program."

(Continued on page 114)

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A payment of $1.50 per ton to sugar beets growers is a bonus equal to 18% of parity. We were told we were entitled to only 94% of parity because beet growers received 108% of parity and any increase for us would mean that beet growers would receive proportionately that much higher figure than parity. One month later the Department of Agriculture announces a bonus for sugar beet growers so that they can be assured of 126% of parity, and cane growers still receive 94%. Incidentally, it is interesting to note that the 94% computation is based upon the average parity index figures for the calendar year 1942. Under last month's parity index, continental cane growers, as a whole, are receiving less than 89% of parity.

Please understand that we do not criticize the incentive payment program for beet growers. It seems entirely sensible in order to assure a greater production of this rationed commodity. We only marvel at the absence of a comparable program for sugarcane growers.

It is not our idea to present this matter as a complaint or protest from cane growers, but rather as an example of the unfairness and unequal treatment which results from trying to apply by formula the programs authorized by Congress and intended to be of equal application to all farmers.

Does it Pay to Plow under Soybean?

(By George Arceneaux, Agronomist, Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.)

The cultivation of soybean in rotation with sugarcane is considered standard practice in Louisiana. A part of the soybean acreage is commonly used for hay in order to supply needed stock feed, but it is generally considered more desirable, especially from a standpoint of soil conservation, to plow under the legume crop as green manure at an appropriate stage. This report summarizes results obtained in an experiment conducted during the period 1931 to 1942, inclusive, to measure the immediate and residual effects of green manuring with soybean on yields of cane and sugar under Louisiana conditions.

Each of the following 3 treatments was replicated 6 times as indicated in Fig. 1.:

1. Soybean vines (entire portion of plant above ground) removed as for hay, no fertilizer applied to plant cane.
2. Soybean crop plowed under, no fertilizer applied to plant cane.
3. Soybean vines removed; sulfate of ammonia applied to plant cane at the rate of 40 pounds of nitrogen per acre.

It should be noted, that while the various treatments were applied prior to, or during the plant cane year, yield measurements and other observations were made on the 3 sugarcane crops in order to determine residual as well as direct effects. A 12-4-4 mixture was applied to each of the two stubble crops at the rate of 333 pounds per acre. Following this initial cane period, the land was again planted to soybean during 1935 and replanted to cane in the fall. Treatments as shown in Fig. 1 were repeated on the identical plots. Succeeding stubble crops again received uniform fertilization as during the previous cycle. The entire procedure was again repeated during the 1939-42 soybean-sugarcane cycle.

This experiment is being conducted on Yazoo very fine sandy loam, one of the major soil types of the Louisiana Sugarcane District.

During 1932-34 the entire experiment was planted to Co. 281, during 1936-38, two replications were planted to each of the following varieties: Co. 281, Co. 290 and C.P. 28/19; during 1940-42, four replications were planted to Co. 290 and two to Co. 281.

Table 1 summarizes results obtained in 9 sugarcane crops thus far harvested. An analysis of the data has shown that observed differences in yields of cane and sugar per acre between 9-crop averages are highly significant.

T. U.	R. F.	R.	R. F.	T. U.	R.
R.	T. U.	R. F.	T. U.	R.	R. F.
R. F.	R.	T. U.	R.	R. F.	T. U.

Fig. 1. Plan of experiment on soil management practice. (See table 1 for meaning of treatment designations). Plots 62 feet long x 5 rows wide separated by 4-foot pathways. The two outside rows served as lateral buffers and their yields were omitted in computing results.

TABLE 1. Yields of cane and sugar obtained from three soil management practices over a period of 12 years.

Treatment[1]	Crop Cycle 1- Average of: Plant cane 1932 1st St. 1933 2nd St. 1934	Crop Cycle 2- Average of: Plant cane 1936 1st St. 1937 2nd St. 1938	Crop Cycle 3- Average of: Plant cane 1940 1st St. 1941 2nd St. 1942	Average of 9 Crops
Yield of cane per acre (tons)				
R.	26.02	26.71	16.89	23.21
T. U.	27.10	27.98	19.65	24.91
R. F.	28.76	28.72	20.79	26.09
Indicated yield of 96° sugar per ton of cane (pounds)[2]				
R.	201.15	184.91	177.09	189.06
T. U.	202.40	182.20	177.15	188.20
R. F.	204.49	183.36	178.40	189.80
Indicated yield of 96° sugar per acre (pounds)				
R.	5,234	4,939	2,991	4,388
T. U.	5,485	5,098	3,481	4,688
R. F.	5,881	5,266	3,709	4,952

(1) R=Soybean vines removed as for hay. No fertilizer applied on plant cane.
T.U.=Soybean crop turned under. No fertilizer applied on plant cane.
R.F.=Soybean vines removed as for hay and 40 pounds nitrogen per acre applied to plant cane in the form of ammonium sulfate.

(2) Weighted average.

Turning under the soybean crop as green manure gave an average increase of 1.70 tons of cane and 300 pounds of sugar per acre per crop, as compared with the practice of removing the vines as for hay. Removing the soybean vines and applying 40 pounds of nitrogen in the form of sulfate of ammonia to plant cane and the 12-4-4 mixture to first and second stubble, gave an average increase of 2.88 tons of cane and 564 pounds of sugar per acre, per crop, as compared with the removal of soybean vines without the application of fertilizer to the plant cane. Thus plots where soybean vines were removed, and fertilizer as indicated above applied to plant cane and stubble cane, produced substantially greater yields of cane and sugar per acre than where the entire growth of soybean was turned under and no additional nitrogen applied to plant cane. In the aggregate of 9 crops thus far harvested, the advantage in this regard has been 10.62 tons of cane and 2376 pounds of sugar per acre.

It is interesting to note that average differences in indicated yield of sugar per ton of cane between the three treatments are small and apparently insignificant.

The cultivation of some crop other than sugarcane during the year preceding plant cane is quite generaly accepted as desirable if not virtually necessary in view of practical difficulties involved in satisfactorily establishing a plant cane crop in immediate succession with cane. For many reasons which need not be enumerated, a legume crop should logically follow in rotation with sugarcane. Green manuring is an accepted principle of soil improvement, therefore it has been quite generally assumed that the best possible use which could be made of the legume crop would be to turn it under as green manure.

This experiment was designed to determine among other things the economic feasibility of applying a generous application of readily available nitrogen on plant cane in lieu of turning under the soybean crop. As stated above this practice has shown a yield advantage of 10.62 tons of cane and 2376 pounds of sugar per acre in the aggregate of 9 crops (3 plant-cane and 6 stubble crops). The economic value of this increase in yield can be readily determined. The commercial value of an acre of soybean vines in the field as a source of hay can be readily estimated and would exceed, by a considerable margin, the cost of sulfate of ammonia to yield 40 pounds of nitrogen. Hence for the duration of this experiment there must be shown a substantial deficit for the practice of plowing under soybean vines in comparison with a system whereby this product would be utilized for some other purpose and in its stead some form of commercial nitrogen applied to the plant cane. It should be recognized of course that the residual effects of green manuring may not be adequately reflected in results so far obtained. But there can be found no evidence in the data to indicate that the relative fertility of plots having received the green manure treatment has improved in a manner remotely consistent with the accumulated costs of the practice.

The value of the organic matter supplied to the soil by the green-manure crop should not be overlooked. However, crop residues from sugarcane supply large quantities of organic matter and could supply still more with minor modifications of our present system. For instance in the burning of cane trash during the customary 3-year period devoted to sugarcane considerably more organic matter is destroyed than is ordinarily turned under in the one soybean crop which follows.

In calling attention to the relatively poor showing of the practice of plowing under soybean as compared with the alternate procedure tested, no sweeping condemnation of green manuring as a system of soil improvement is intended. The results discussed were derived from a single experiment on soil of a certain type. It is believed however that conclusions to be drawn from the results are of sufficient importance to sugarcane growers of Louisiana to merit presentation at this time.

As measured in terms of increase in sugar per acre, a soybean crop had approximately the same effect as 21 pounds of nitrogen applied on the plant-cane crop. (Adding 40 pounds of nitrogen gave an increase in yield of sugar per acre 1.88 times as great as obtained from geen manuring). Yet each soybean crop plowed under contained, on the average, approximately 150 pounds of nitrogen. On that basis it would seem that only 14% of the nitrogen incorporated in the soil as green manure had an appreciable effect on cane yields.

A crop of soybean as ordinarily harvested for hay contains more nitrogen than is commonly applied on 3 crops of sugarcane. Where it was removed and considerably less than the equivalent of its nitrogen content was applied during the course of the 3 succeeding crops in the form of annual doses of sulfate of ammonia, very satisfactory results were obtained. But where the soybean crop was turned under, the available nitrogen aparently did not adequately supply the requirements of even the plant-cane crop.

In accordance with prevailing practice, the soybean crops in this experiment were plowed under during late July or early August. Subsequent operations of seed-bed preparation and planting kept the land relatively free of vegetation until fall. During hot to mild weather commonly prevailing in August, September, October, and early November, nitrification must have proceeded at a very rapid rate. It is therefore possible that much of the nitrogen of the legume crop may have been leached out as nitrates or otherwise dissipated before the cane crop could make use of it. In this connection it might be mentioned that studies have shown that the total nitrogen in the soybean plant reaches its peak during the blooming stage after which it declines rapidly.[1] Full bloom is reached during late July or early August

[1]Arceneaux, G., McKaig, N., and Stokes, I. E. Studies of soybean and other green manure crops for sugarcane plantations. Jour. Am. Soc. Agron. 24: 354-63, May 1932.

with most of our cultivated varieties. Further, to delay plowing under the crop much beyond that period would entail the danger of additional losses from insect damage.

It should be recognized that utilization of the nitrogen from green manuring under the conditions involved may present certain problems which are more or less peculiar to the region involved. The length of the period between the optimum time for turning under soybean and the onset of winter is longer in southern Louisiana than in more northerly situations. Sugarcane, a tropical plant, requires relatively warm weather for rapid growth and consequent rapid utilization of nitrogen. Therefore, it is probable that losses from leaching under such conditions are much more serious than in more northerly situations where the period of fallow between green manuring and winter is shorter or under conditions where the succeeding crop is such that rapid growth is initiated during early spring. Further, leaves and other crop residues from sugarcane may supply organic matter in such proportions as largely to eliminate the need for additional supplies of this essential fertility element.

In conclusion, the results of this experiment indicate that it may be found profitable to re-examine in a more critical light, policies with regard to green manuring traditionally followed in the Sugarcane District of Louisiana. Producing stock-feed from the soybean crop and turning to other sources for the needed nitrogen would seem to offer a practical possibility. The growing of suitable grain varieties of soybean might also be considered. The seed could supply a substantial quantity of vegetable oil now badly needed in our war economy.

On the other hand it may be possible to devise some means whereby more efficient use can be made of the legume crop for soil improvement. The value of organic matter as a means of enhancing soil fertility is well established and it is possible that some modification of our present system might solve our apparent difficulties. It goes without saying, however, that any system, regardless of its theoretical merits, must in the last analysis, prove itself economically sound in order to survive. It would seem more than a possibility that the prevailing system of handling the soybean crop in rotation with sugarcane entails substantial losses in nitrogen—an element of prime necessity at all times—but right now one of critical importance.

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Manpower Order Issued

(Official Release)

Moving to carry out that part of the President's Order stabilizing wages, prices and employment, the War Manpower Commission on April 17th acted to stop transfers to jobs at higher wages unless the shift is in the interest of the war program.

Chairman Paul V. McNutt, of WMC issued a regulation which will put into effect Section 3 of the President's "hold the line" order, the action having the approval of James F. Byrnes, Director of Economic Stabilization. The regulation, which took effect on a nationwide basis Sunday, April 18, provides:

(1) All transfers of workers from activities not on the essential list to activities on the list will be encouraged. Such shifts contribute to the winning of the war and any worker may make such a change even if an increase in wages is involved.

(2) No shift from work in an essential activity to an activity not so classified will be permitted if higher wages will be paid.

(3) If the shift is from one essential activity to another and no wage increase is involved, approval is not required except for employments covered by employment stabilization plans.

(4) In general if the shift is from one activity not on the essential list to another also not on the essential list, such a move is not yet subject to this regulation.

(5) If the shift is from one essential activity to another and is subject to one of the WMC employment stabilization programs, the change can be made at a higher wage rate if the worker leaves his job for reasons that are consistent with the provisions of these plans. Where the terms of the plans conflict in any way with the intent of the executive order on which the regulation is based, the plans will be modified.

(6) If the shift is from one essential activity to another essential activity and is not subject to the provisions of one of the employment stabilization plans, the change cannot be made if higher pay is involved.

An essential activity is described as one listed by the WMC to indicate those activities required in connection with the effective prosecution of the War. A list of such activities is included with the order. It now includes 35 basic activities and industries.

Since this regulation is concerned with transfer from one employer to another employer, it in no way prejudices existing rights of an employee with his present employer.

Penalties are provided for violation of the order, both by employer and by employee. The penalties are those behind the entire executive order which are those provided by the Stabilization Act of October 1942. An employer who hires a worker in violation of the regulation may not count any wages paid to the worker as deduction from his income tax, nor as any part of the cost of his business for the purpose of obtaining any price adjustments, nor for the purpose of determining costs in connection with the fulfillment of any Federal contract. In addition the employer may be sentenced to pay a fine of $1000 or to a year in jail, or both. A worker found guilty of violation also will be subject to the $1000 fine or to a year's imprisonment or both.

Mr. McNutt said that administration of the regulation will be by area and regional offices of the WMC.

List of Essential Activities

1. Production of Aircraft and Parts
2. Production of Ships, Boats and Parts
3. Production of Ordnance and Accessories
4. Production of Ammunition
5. Agriculture and Commercial Fishing:
   5a (*sugar cane for sugar and syrup, sugar beets, sugar beet seed, sorghum and sorgo syrup*)

5b Agricultural Service and Commercial Fishing

6. Processing of Food (*Sugar*)
7. Forestry, Logging and Lumbering
8. Construction
9. Coal Mining
10. Metal Mining
11. Nonmetallic Mining and Processing and Quarring
12. Smelting, Refining and Rolling of Metal
13. Production Metal Shapes and Forgings
14. Finishing of Metal Products
15. Production of Industrial and Agricultural equipment
16. Production of Machinery
17. Production of Chemicals and Allied Products and Essential Derivatives Thereof
18. Production of Rubber Products
19. Production of Leather Products
20. Production of Textiles
21. Production of Apparel
22. Production of Stone, Clay and Glass Products
23. Production of petroleum, Natural-Gas and Petroleum Coal Products
24. Production of Finished Lumber Products
25. Production of Transportation Equipment
26. Transportation Services
27. Production of Materials for Packing and Shipping Products
28. Production of Communication Equipment
29. Communication Services
30. Heating, Power, Water Supply and Illuminating Services
31. Repair Services
32. Health and Welfare Services
33. Educational Services
34. Governmental Services
35. Technical, Scientific, and Management Services

Eastern Club Meets

A meeting of the Louisiana Sugar Producers' Club (Eastern Division) was held on April 8th in Thibodaux and was called to order at 1:15 P.M. by Pres. Horace Helson.

Present were:

Horace Nelson, Pres., Raceland, Godchaux Sugars
J. T. Landry, Vice-Pres., Tallieu, J. Aron & Co.
Edward J. Gay, Plaquemine, St. Louis Sugar Coop.
James LeBlanc, Plaquemine, St. Louis Sugar Coop.
J. R. Macreadie, Plaquemine, St. Louis Sugar Coop.
Irving E. Legendre, Thibodaux, Lafourche Sugars Corp.
John F. Boudreaux, Thibodaux, Lafourche Sugars Corp.
T. L. Price, Thibodaux, guest of Lafourche Sugars Corp.
A. G. Robichaux, Labadieville, E. G. Robichaux Co. Ltd.
J. W. Ingram, Houma, Federal Sugar Station
Royce T. Balch, Houma, Federal Sugar Station
Eaton M. Summers, Houma, Federal Sugar Station
F. J. Aycock, LaPlace, guest of Godchaux Sugars
R. E. Caldwell, Thibodaux, Caldwell Sugars Inc.
H. A. LeBlanc, Reserve, Godchaux Sugars
Elliott Jones, Houma, Realty Operators Inc.
William McCollam, Thibodaux, Caldwell Sugars Inc.
Andrew McCollam, Ellendale, guest of Realty Operators Inc.
A. J. Isacks, Houma, Realty Operators Inc.
W. Boudurant, Reserve, Godchaux Sugars Inc.
Samuel Klotz, Napoleonville, guest of Lula Factory
L. J. Peltier, Thibodaux, County Agent
L. J. Richard, Thibodaux, Asst. County Agent
Sabin J. Savoie, Belle Rose, Lula Factory
B. Thibaut, Napoleonville, Glenwood Sugar Coop.
Felix H. Savoie, Paincourtville, Dugas & LeBlanc Co. Ltd.
Joe G. Richard, Baton Rouge, L.S.U. Agr. Extension Division
Bryan Gilbert, Belle Rose, guest of Lula Factory
Thomas Bourgeois, Tallieu, J. Aron & Co. Ltd.
Herbert Alwes, Tallieu, J. Aron & Co. Ltd.
G. C. LeBlanc, Sr., Raceland, guest of Godchaux Sugars
F. A. Graugnard, Jr., St. James, Guest, Realty Operators
R. F. Brou, Welcome, Realty Operators
C. J. Tucker, Vacherie, Realty Operators
C. F. Daigle, Jr., Labadieville, E. G. Robichaux Co. Ltd.
E. W. McNeil, Cinclare, Cinclare Factory
J. J. Munson, Houma, The South Coast Corp.
Thomas Lowe, Thibodaux, Realty Operators
J. F. White, Jr., Mathews, The South Coast Corp.
H. J. Jacobs, Mathews, The South Coast Corp.
L. G. Gerard, 837 Whitney Bldg., N. O., La., Guest, Waterford Sugar Corp.
E. P. Munson, Napoleonville, Realty Operators Inc.
F. A. Robichaux, Labadieville, E. G. Robichaux Co. Ltd.
E. N. Kearny, New Orleans, Realty Operators Inc.
C. W. Peterman, New Orleans, guest of Realty Operators Inc.
W. C. Bryne, New Orleans, Realty Operators Inc.
Ernest R. Theriot, Houma, The South Coast Corp.
W. B. Gibbens, Mathews, The South Coast Corp.
L. L. Fauntleroy, Thibodaux, A.A.A. Administrator
L. A. Borne, Raceland, guest of Godchaux Sugars
Ivy J. Redmond, Montegut, The South Coast Corp.
M. J. Andrepont, Houma, County Agent
John C. Burden, Napoleonville, Little Texas Factory
R. M. Murphy, 1002 Whitney Bldg, N. O., La., Waterford Sugar Coop.
John J. Tregre, Napoleonville, guest of Little Texas Factory
M. J. Foley, Napoleonville, guest of Little Texas Factory
George G. Keen, Minerva, Magnolia Sugar Coop.
E. A. Rose, Minerva, Magnolia Sugar Coop.
Paul Borron, Jr., Plaquemine, Counsel A.S.C. League
Marcel J. Voorhies, 414 Whitney Bldg., N. O., La., Secretary

Mr. Nelson expressed his gratitude for the attendance of such a large representative group of the various segments of the industry. These meetings, besides being the forum for discussion of pressing industry problems also afford a pleasant opportunity for maintaining old acquaintances and making new ones. As people know each other better they develop a more sympathetic appreciation of each other's problems. These groups meetings are sure to develop a good fellowship which is desirable and needed in any industry.

Mr. McNeil, chairman of special committee appointed to look into the problem of evaluating perquisites made a short progress report to the group. He stated that his committee had a preliminary conference with Dr. Harlan L. McCracken of L.S.U. An approach to the subject was tentatively outlined. It is the plan to have Dr. McCracken discuss this subject at the next meeting and then the committee will undertake its assignment.

Mr. Nelson briefly discussed the position of a group of sugar factories with respect to the Farm Bureau and was pleased to note that all of the mills contacted, thus far, have agreed to assist in the maintenance of a strong Louisiana Farm Bureau.

At this point the President called on Mr. Joe Richard, assistant Director of L.S.U. Agricultural Extension Division who discussed organization and the interest of Extension in proper Louisiana representation in a National Farmers' Organization. He stated that the college of agriculture was familiar with the policies, aims and methods of the Farm Bureau and endorsed it wholeheartedly. He stated further that the program of the Agriculture Extension Division was the program desired and endorsed by the local people in the various communities.

Dr. Ingram of the Federal Sugar Station briefly discussed borer infestation and control. He stated that the personnel of the Federal and State stations was ready and willing at all times to assist the sugar-cane producers with their borer control problems.

Employment of Women in Raw Sugar Factories

(By H. T. Bond—The South Coast Corp.)

While new Selective Service Regulations will apparently prevent any further serious inroads by the draft into agricultural labor at the plantations, and while the several Selective Service Local Boards have been most considerate in deferring key men in the offices and the factories, nevertheless, the number of men available for operating raw sugar factories will steadily diminish.

We must therefore consider to what extent women may be used in factory operations and what legal and practical limitations attend their employment. It is fortunate that in most communities where factories are located that there are sufficient available women to provide for requirements and permit selection of those who will best fit in with the needs.

A survey of several factories indicates that women might be used as follows:

Supervision and Control	7 women
Clerical	2
Weighing cane	3
Juice Scales	3
Effects	3
Molasses Tanks	3
Crystallizers	2
Total	23

In order to comply with the legal requirements and to permit these women to work safely and productively, the following must be considered:

Age: The legal minimum age for women in raw sugar factories is 16 years, however, where possible the minimum should be put at 18 and preference given to those between 25 and 36 since experience has shown that these older women are more reliable and also less prone to accidental injuries.

Hours: The legal maximum in raw sugar plants is ten hours per day and sixty hours per week.

Wages: The same minimum wages as apply to men also apply to women. Sound practice is to pay substantially the same rate as paid to men doing the same work where production is comparable.

Clothing: While there are no legal restrictions in connection with clothing, it is good practice to require the wearing of safe clothing. Loose flowing garments are dangerous and should not be permitted.

The recommended costume consists of slacks and a tucked-in blouse, or overalls on dirty jobs; sleeves should be short and close fitting; shoes should be low-heeled and not have open toes.

No rings, watches or necklaces should be worn; the hair should be covered by a cap or a substantial net and not allowed to hang loose.

Seats: The legal requirement is one seat, chair or bench for each three women employed. Good practice depends on the work being done. Where possible, women should be allowed to sit at work; where they are required to stand, or move, a convenient chair should be provided for rest at intervals.

Meal Time: The legal requirement is that women have at least a 30 minute lunch or recreation period on each shift of 6 hours or more unless the shift ends at the end of 6-1/2 hours.

Sanitary Facilities: Louisiana Law requires one toilet for every twenty-five women employed. Reasonable facilities for washing are also required.

Good industrial practice indicates one toilet for every fifteen workers on a shift, and in connection therewith, a clean, well lighted dressing room with adequate wash basins, chairs and mirrors. Experience has shown these facilities to be of utmost importance in the successful employment of women. The dressing room should be large enough to contain two or three chairs, it should be finished with attractive walls such as of Celotex; the floor should be covered with linoleum and lighting should be ample. This room should be near the First Aid Station, if possible.

Records: *Notices*: It is required that employers keep for a period of one year complete time records of each female worker showing the wages paid; the number of hours worked each day; the time of beginning and ending work, and the time of beginning and ending the lunch or rest period.

It is required that the number of employees be furnished the Department of Labor on demand.

The State Factory Inspector must be notified that women are employed on the premises.

It is required that a report of all accidents causing loss of time for two weeks or more, or death, in establishments employing women be reported to the Department of Labor (State) semi-annually.

It is required that a digest of labor laws, furnished by the Commissioner of Labor be posted on the premises.

Safety Requirements: The legal Safety requirements are that stairways have substantial railings, floor openings be guarded, dangerous machinery be guarded and women be not allowed to clean or oil machinery in motion.

Over and above the legal requirements, it is to be noted that women are more susceptible to falls than men so that floors and stairways should be well lighted.

Since their strength is less and they are more susceptible to strains than men, women must not be required to lift heavy objects ordinarily handled by men.

Also, since women are more susceptible to infection than men, their instruction in securing First Aid must be thorough.

Because of their inexperience, in general, with machinery, women must be taught their work with care and precision and with emphasis on the hazards involved.

Foremen must be instructed to pay special attention to women workers to prevent injuries.

Foremen should be given instruction in the problems introduced by the employment of women.

Food at War

(By A. W. Dykers)

The following paragraphs have been taken from a report on the U. S. wartime food situation issued by the *Office of War Information.*

1943 Civilian Food Situation

The situation for 1943 is that the total (food) production, assuming average weather, will probably be at least 3 per cent greater and may be 8 or 10 per cent greater than in 1942. However, the needs of

our armed forces operating on scores of different fronts over the globe, and of our fighting allies, gathering their energies for the decisive offenses of the war, will add up to one-quarter of the total supply. On the average a soldier must be provided with about twice as much food as the average civilian. Three-quarters of the total supply will be reserved for civilians.

Less

Compared with 1942 and roughly estimated on the basis of the prospective 1943 output, civilians this year will have about 11 per cent less meat; 27 per cent less canned and shell fish; 21 per cent less butter; 11 per cent less cheese; 15 per cent less canned milk; 51 per cent less canned fruits; from 3 per cent to 25 per cent less various fresh vegetables; 27 per cent less canned vegetables; 6 per cent less dry beans; about 22 per cent less *Sugar;* 21 per cent less rice; 29 per cent less coffee; 60 per cent less tea; and 12 per cent less cocoa.

About The Same

Civilians will have about the same amount of fresh and frozen fish, eggs, turkeys, fluid milk and cream, lard and other cooking fats, fresh citrus fruits, canned fruit juices, dried fruits, tomatoes, Irish potatoes and sweet potatoes, corn, oats and barley for human consumption.

More

Civilians will have 30 per cent more chickens; 57 per cent more margarine; 9 per cent more apples; 13 per cent more frozen fruits; 7 per cent more wheat; and 13 per cent more rye.

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., MAY 15, 1943 No. 16

New Selective Service Rules Announced

In order to familiarize the people of the sugar cane industry with up-to-the-minute information regarding Selective Service Regulations and amendments, the Chairman of your Educational Committee recently conferred with Brigadier General H. Fleming, State Director of Selective Service and Lieutenant Colonel J. Lester White, Chief, Review and Appeal Division, at Selective Service Headquarters. The information secured was reduced to writing in the following article, prepared at Selective Service Headquarters for inclusion in the Sugar Bulletin.

Selective Service Classifications

Certain changes in the Selective Service Regulations have been made in order to enable the Selective Service System to continue to meet the manpower requirements of the armed forces, war production, agriculture and other essential civilian activities and, at the same time, protect as long as possible homes where there are minor children.

Any registrant, unless he comes within one of two stated exceptions, shall be retained or placed in Class III-A if he and his child or children maintain a bona fide family relationship in their home and if such status was acquired prior to December 8,1941. The child must have been born on or before September 14, 1942. The two exceptions mentioned are:

(a) All such registrants who are also necessary to and regularly engaged in agricultural occupations or agricultural endeavors essential to the support of the war effort shall be placed in Class III-C, and

(b) The classification of all such registrants who are engaged in activities or occupations designated as non-deferrable shall be given thirty days from April 1st, for those between 18 and 37 inclusive, and May 1st for those 38 to 44 inclusive. to transfer to an essential occupation.

In eliminating Class III-B and creating Class III-D, it has been directed that Local Boards shall immediately reopen and classify anew registrants now in Class III-A who are no longer entitled to remain therein and also immediately reopen and classify anew all registrants now in Class III-B.

In such reclassification, Local Boards shall consider whether the registrant, according to Selective Service Regulations, is entitled to be placed in Class III-C by reason of his agricultural occupation or endeavor and dependents; to be placed or continued in Class III-A because of his family relationship with his children; in Class II-C because of his agricultural occupation or endeavor alone; or in Class II-A or Class II-B by reason of his occupation in an activity essential to the support of the war effort or production.

Finally, after determining that the registrant is not to be classified in Class III-A, III-C, II-A, II-B or II-C, Local Boards are instructed to consider whether the registrant should be placed in Class III-D because of the possibility of his dependents suffering hardship and privation if he is inducted into the land or naval forces. If the registrant does not qualify for any of these classifications, he is then mailed DSS Form 201 instructing him to report for a physical examination.

From this it will be seen that employers should now prepare and submit to the Local Boards DSS Forms 42 or 42A (general or industrial) for those key employees, fathers excepted other than those engaged in agriculture, whose services, if suddenly lost, would cause a serious interruption. DSS Form 42B, "Occupational Certification", should now be submitted for all such registrants who have wives and minor children or who have minor children and who are maintaining bona fide family relationships.

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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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L. A. Borne, Raceland, La

DSS Forms 42A will receive every consideration and, if the Local Board determines a I-A classification, the employer will be so informed and allowed an appeal.

DSS Form 42B will be placed in the cover sheet of the registrant and, when the registrant's classification is to be considered anew, the employer will be informed and be given fifteen days in which to submit DSS Forms 42A if he then wishes to ask for an occupational classification.

It has become apparent that some employers are laboring under the impression that registrants will not be inducted if they have passed their thirty-seventh birthday and are about to become thirty-eight years of age. Under Selective Service Regulations, unless a man has actually reached his thirty-eighth birthday on or before the date scheduled for induction he shall be tendered to the induction center.

In submitting DSS Forms 42 requesting agricultural classifications (Class II-C and III-C), there must be submitted to the Local Board detailed information as to the kind of crops in cultivation and the acreage of each. There must also be a certification as to the number of workers on the farm and all such persons must be shown, regardless of age and sex.

State Selective Service Headquarters and Local Boards continue to receive belated requests for agricultural and industrial deferments. These requests are received through letters, special delivery and air mail, telegrams and telephone calls after the registrant has been classified. In numerous instances the request is made after the registrant has received his induction notice and when less than ten days (required by law) remain in which to call an alternate.

It behooves employers to survey their personnel with a view to determining key employees now vulnerable for military service and submit requests (DSS Forms 42 and 42A) to the Local Boards at the proper time. In doing this, employers are assured that such requests can and will be given every consideration by Selective Service Boards. If denied, the employer will be in a position to exercise his right of appeal.

DSS Forms 42, 42A and 42B are obtainable at any Local Board office but, if required in quantities, requests should be mailed to State Selective Service Headquarters, Jackson Barracks, New Orleans, Louisiana.

President Kemper Recognizes and Thanks Federal Houma Station

(By Wallace C. Kemper)

For our April 15th issue, I wrote a short statement in explanation of the efforts expended by various Louisianians in obtaining dusting machines to be used in the sugar belt on borer control. There followed an article by A. L. Dugas, Assistant Entomologist at the State Experimental Station. Some of our readers have concluded that our failure to stress the value of the endeavors of the Federal Station at Houma on borer control may have given the wrong impression. The statement preceding Mr. Dugas' report pertained to the dusting machines. His article on the value of their use definitely stated that the State and Federal stations had worked jointly on the problem since 1937. However, I would like to correct the erroneous impression given in my statement by the following resume of the borer control work:

The Louisiana Agricultural Experiment Station at Baton Rouge, and the U. S. Bureau of Entomology and Plant Quarantine Laboratory at Houma, jointly developed the method of borer control by dusting with cryolite and these agencies should be equally credited with the discovery and development of this control measure. Cooperative research on cryolite as a borer control was begun in 1937 with Doctor L. O. Ellisor, under the supervision of Doctor C. O. Eddy, representing the Baton Rouge Station and Messrs. J. W. Ingram, E. K. Bynum and others representing the Houma Station. These men discovered that cryolite gave a good borer control and continued their cooperative testing of this control measure until November, 1939, when Mr. Dugas succeeded Doctor Ellisor. Doctor Ellisor and Mr. Ingram published a paper in the Proceedings of the International Society of Sugarcane Technologists in 1939 showing that a high degree of borer control was obtained by dusting with cryolite. Mr. Dugas has represented the Baton Rouge Station in the cooperative work from November, 1939 to 1942, while the Houma cooperators have remained the same. The Houma and Baton Rouge Stations conducted separate investigations on second-generation borer control in 1942. It may be noted that the U. S. Department of Agriculture and the Louisiana Agricultural Experiment Station jointly recommended borer control by cryolite in the March 1, 1943 issue of the *Sugar Bulletin*.

Extension Circular No. 151

(We quote the following from Extension Circular No. 151—Program of Sugarcane Production for Southern Louisiana.)

Cultivation—Early Work

When we begin to cultivate our crops, the first operation consists in wrapping the middles. This can be done at the will of the planter. It should be done deeply and thoroughly because we are rapidly approaching the time when no more plowing should be allowed. But the off-bar furrow should not be run until the cane has clearly shown that it is approaching the stage when we can expect it to come up to a stand. This is particularly true in the case of stubble canes. It is true because in running the off-bar furrow the greater portions of the old root system is pruned. Experiments have shown conclusively that this old root system functions in feeding the young cane until it has established its own root system, and for that reason, as much of it as is possible should be left intact as late in the season as is practicable. In many instances, even before wrapping the middles of stubble, it is well to sink the old middles deeply. After a wet harvest when the wagon wheels have driven quantities of cane flags into the ground, this is a particularly good practice because the plow brings these old tops into contact with air and hastens their decomposition. The use of the plant cane scraper or the stubble shaver is optional. These are two implements capable of doing good work and of saving much money when properly used. Neither of them should be used as a habit. On the other hand, they should be employed judiciously and intelligently. If the plant cane scraper is used after much of the cane has come up, the scraper will undoubtedly break many of the young canes back to the mother stalk. And while germination will come again from such broken canes, it will be delayed and often is delayed until after so much soil has been brought back to the drill that these weaklings never see daylight. The stubble shaver should never be used until after a thorough examination to determine the condition of the eyes on the root stock. If examination shows the eyes on the lower end of the root stock to be good, then there is no danger of losing a stand by shaving stubble. On the other hand, if the winter has been such as to cause the lower end of the root stock to die, shaving of the upper eyes may destroy from 1/3 to 1/2 of the good eyes remaining, and may result in gappy stands.

The sled type shaver is not well suited to the new varieties of cane which we are now growing. It tends to split the stubbles and even pull them out of the ground. The opposing disc and the newly developed single disc, when kept in good mechanical condition, and particularly when power driven, makes a clean cut with but little damage. In using a mechanical scraper on plant cane this operation has to be planned or by covering the seed cane to a depth of four inches. Where seed cane is covered only two inches, it would hardly be possible to run the scraper without doing serious damage to the seed cane. After running the mechanical scraper, all fields should be examined to see that no portion of them has been left with the cane too deeply covered. In fact, it is a good practice to run a hoe gang behind a scraper to cover exposed seed cane as well as remove extra soil where the seed cane has been left covered to too great a depth. *Not more than two inches of soil should be left after this operation.* Much of the unsatisfactory stands, in the case of C. P. 28-19, C. P. 29-320 and Co. 281, are due to improper removal of excess soil in the early spring.

Stubble Digger

The stubble digger is a tool which can be dispensed with, especially in the case of very favorable weather conditions. It should be run early in the season to spade the soil around the stubble before germination has developed to any considerable extent. If this tool is run over cane which is germinating freely, it will break many of the young sprouts; whereas, if it is run early, it will save much hand work and insure earlier germination of the stubble crop. The matter of following the stubble digger with a hoe gang is purely optional. In the case of a late spring it is usually a very profitable procedure.

Fertilization

When the cane has come up to a stand, we are ready to apply fertilizers, and in this operation we prefer to so set the spouts of the distributor as to distribute the fertilizer against the sides of the middle rather than around the cane shoots and in the bar furrow. Our object in doing this is to insure a mixture of fertilizer with the portion of the soil which will come in contact with the young roots at an early stage. If the fertilizer is distributed along the edge of the middles, it will be mixed into the soil where these middles are reversed.

In reversing the middles we should recognize that this will be our last chance to use heavy plows. The middles should be broken as deeply as is possible and then all forms of plows returned to the tool shed to stay until the following fall.

Later Cultivation

If soil preparation has been good and the middles thoroughly broken, the object of cultivation from this stage on is to suppress weed growth and maintain tilth. Deep plowing during the process of late cultivation should be avoided. Soil should not be returned to the young plants until germination has insured the desired stand. Great care should be exercised in the cultivation of Co. 281 and C. P. 28-19. These varieties are both slow in sending out suckers; therefore, no dirt should be put to these canes until all suckers that are wanted are out. Many stands have been completely ruined by too early dirting. In our experience, the spring tooth cultivator which can be made to cover a six-foot row at one operation is the ideal tool for the first, and often the second cultivation. A hinged drag harrow made to straddle the cane has also proven a very good implement. After this, cultivation around the cane should be done with a disc cultivator, so set that it will cut a minimum number of roots and one of the shovel type middle cultivators should be used to complete the job. Here again it pays to reverse the ordinary plan of procedure by running the middle cultivator in front of the disc cultivator. This is true because the middle cultivator can be made to throw loose dirt on the side of the row to be picked up by the disc cultivator and carried into the drill without going deep enough to prune roots. Root pruning is the most destructive agency with which we have to contend. Root pruning not only minimizes tonnage but retards growth, thereby delaying maturity.

Lay-By

It is a well-known fact among cane growers that cane does not make its maximum growth until after the lay-by. This is due to the fact that in late cultivation, root pruning is so heavy that growth is de-

layed. Whereas, after lay-by and the permanent root system is established, steady growth can be maintained. These facts are sufficient to show the necessity for an early lay-by and we can well afford to revise our rules for lay-by by anticipating the time when the tops will shade the row rather than to wait for them to actually shade the row before the last cultivation. The same procedure should be followed as under cultivation; that is, running the middle cultivator before the disc cultivator. Care must be taken not to cut any more roots than is absolutely necessary.

Mr. S. C. Munson

Mr. Stephen C. Munson, manager of the Delgado-Albania plantation, has been elected executive vice-president of the Louisiana Farm Bureau Federation. Mr. Munson is a member of the Executive Committee of the American Sugar Cane League, and is a former president of the League.

Packing and Grading Direct Consumption Sugar

(Document No. 15004)

PART 1334—SUGAR, CONFECTIONERY AND SOFT DRINKS

[RPS 60,[1] Amendment 6]

DIRECT-CONSUMPTION SUGAR

A statement of the considerations involved in the issuance of this Amendment, issued simultaneously herewith, has been filed with the Division of the Federal Register.*

Revised Price Schedule 60 is amended in the following respect:

1. Section 1334.51 (a) (6) (i) is added to read as follows:

(i) Maximum prices for a primary distributor of direct consumption sugar for grades and packages not provided for in the above shall be as follows:

For a new grade and package identical in grade, net weight, and packing material with that of any other primary distributor he shall adjust his maximum base price by the use of the same differential properly established on that date by the primary distributor with such differential located nearest freightwise to him.

If the new grade and package is not so identical with that produced by another primary distributor he shall obtain a maximum price for it by application to the Office of Price Administration, Washington, D. C., in which he shall give full data with a description of grade and package, detailed production and selling cost differences f. o. b. refinery between the new grade and package and the basis bag packing per 100 pounds at the date of application and corresponding figures for his most nearly like grades and packages as of December 1, 1941, together with a request for a specific differential. After filing application and pending authorization from the Office of Price Administration sales may be made (a) on open billing or (b) on pro forma collection price based on the requested differential with an agreement for refund to the purchaser of such sum as this price may exceed the maximum price when duly established or (c) on the basis of differential at which sales have heretofore been made prior to the effective date of this amendment.

This amendment shall become effective May 8, 1943.

(Pub. Laws 421 and 729, 77th Cong.; E.O. 9250, 7 F.R. 7871)

Issued this 3d day of May 1943.

PRENTISS M. BROWN,
Administrator.

*Copies may be obtained from the Office of Price Administration.

[1] 7 F.R. 1320, 1836, 2132, 2510, 5664, 6787, 8928, 8948, 8949.

Mr. C. J. Bourg

Mr. C. J. Bourg, manager of the Washington Office of the American Sugar Cane League, is in Louisiana at present recuperating from a recent illness brought on by the stress and strain of his Washington duties.

Western Club Meets

A meeting of the Louisiana Sugar Producers' Club (Western Division) was called to order at 12:30 P.M. on May 7th by President R. O. Young who expressed gratification for the splendid attendance.

Present were:

Dr. R. O. Young, President, Youngsville Sugar Factory
G. L. Pace, Vice-President, Iberia Sugar Coop.
Harry D. Smedes, Oasis Factory
J. E. Caldwell, Vermilion Factory
Paul G. Moresi, Erath Factory
M. V. Yarbrough, Youngsville Factory
Rene L. Chauffe, Ruth Factory
Harry L. Henslee, Youngsville Factory
Robert J. Gauthier, Levert-St. John Factory
Geo. M. Germany, Iberia Sugar Coop.
Serge Golodetz, Orange Grove Factory
R. L. Roane, Loisel Factory
Geo. L. Billeaud, Billeaud Factory
W. C. Kemper, Sterling & Shadyside Factories
Stephen C. Munson, Delgado-Albania Factory
J. R. Roane, Loisel Factory
F. G. Blumenthal, Jr., Vida Factory
Alphonse Labiche, Ruth Factory
John M. Caffery, Columbia Factory
Earl Chauffe, Ruth Factory
H. L. Trowbridge, Alice C. Factory
J. P. Duhe, Duhe-Bourgeois Factory
Murphy Foster, Maryland Factory
C. B. Caldwell, Erath, La.
Lawrence Melancon, St. Martinville, Rt. No. 1
W. J. Bernard, Jr., St. Martinville, Rt. No. 1
B. F. Flanders, Jr., Youngsville, La.
V. H. Eckard, Abbeville, La.
Wallace Landry, Broussard, La.
Silvio Broussard, New Iberia, La.
E. A. Rose, New Orleans, La.
A. J. Keller, Donaldsonville, La.
F. M. Burleigh, Jeanerette, La.
Leon J. Menville, New Iberia, La.
W. F. Giles, Adeline Sugar Factory
W. K. Walton, Thibodaux, La.
Frank M. Bacque, Youngsville, La.
Rene C. LaSalle, New Orleans, La.
E. V. LaSalle, New Iberia, La.
Lionel Kling, New Iberia, La.
Ulysse Landry, New Iberia, La.
Didier Smith, Youngsville, La.
Daniel Trahan, Youngsville, La.
S. C. Todd, Franklin, La.
P. J. deGravelles, County Agent, Franklin, La.
Dr. H. L. McCracken, L. S. U.
W. G. Taggart, L. S. U.
C. B. Gouaux, L. S. U.
W. M. Grayson, AAA, L. S. U.
Marcel J. Voorhies, New Orleans, La.

Mr. Kemper reported that the American Sugar Cane League was pleased and gratified that the Industry had been able to secure its fertilizer require-

ments. So far as can be learned only four individuals did not get the amount of fertilizer they wanted and two of those secured as much as they had originally ordered. Cyanamid is now available in any reasonable quantity for delivery about May 19th or 20th.

At the suggestion of the Chairman a unanimous vote of thanks was voiced to the President of the League for the League's unceasing efforts to secure the fertilizer needs of the Industry.

The chair complimented Mr. Stephen C. Munson and expressed the appreciation of the group at his selection as Executive Vice-President of the Louisiana Farm Bureau. He said that Mr. Munson was always very actively interested in farm problems and Farm organization and that his advice had always been most helpful.

Mr. W. R. Walton was introduced as the South Louisiana Field representative of the State Farm Bureau by Mr. Munson. Mr. Walton briefly discussed Farm Organizations and the Farm Bureau. He stated that the Farm Bureau was headed by a rice farmer, then a cotton farmer and now a sugarcane farmer.

The chair introduced Dr. H. L. McCracken of L. S. U. who very ably discussed the evaluation of perquisites and their relation to wages. He stated that organized labor wants all wages paid in cash and does not want perquisites as such. He stated that while there does not appear to be any uniformity in the evaluation of perquisites, that perquisites can be established, can be evaluated, and are legal.

A resolution proposed by Mr. Duhe, expressing hope that Mr. Jules Burguieres would soon recover from his illness was seconded by Mr. Billeaud and unanimously approved.

The meeting also complimented, by resolution, the South Coast Corpn., for its foresight in selecting Mr. J. J. Munson as its new president.

Mr. W. H. Grayson gave a resume of a recent trip to the Florida Sugar Area.

Mr. Grayson also stated that the AAA is now making every effort to complete conditional payments by July 1st of this year.

Mr. J. J. Shaffer

Mr. John J. Shaffer, Jr., 1st vice-president of the American Sugar Cane League, has been appointed a member of the Board of Directors of the Federal Reserve Bank. Mr. Shaffer is a cane grower with properties in Terrebonne Parish.

Purchase or Sale of Direct Consumption Sugar

Because the Commodity Credit Corporation now has been authorized to perform functions in connection with purchases, sales and transportation of direct-consumption sugar which previously had been performed by Defense Supplies Corporation, the Office of Price Administration on May 7th extended to the first the same pricing provisions which have heretofore covered the second.

This action, taken through Amendment No. 7 to Revised Price Schedule No. 60 (Direct-Consumption Sugar), also provides that any other Government agency which may, in the future, be authorized to perform such functions shall be in the same category. The Amendment is effective as of December 15, 1942.

(Document No. 15300)

PART 1334—SUGAR, CONFECTIONERY AND SOFT DRINKS

[RPS 60,[1] Amendment 7]

DIRECT-CONSUMPTION SUGAR

A statement of the considerations involved in the issuance of this Amendment, issued simultaneously herewith, has been filed with the Division of the Federal Register.*

[1] 7 F.R. 1320, 1836, 2132, 2510, 5664, 6787, 8928, 8948, 8949.

Section 1334.61 is amended to read as follows:

§ 1334.61 *Provision with respect to direct-consumption sugar to be purchased or sold by Defense Supplies Corporations Commodity Credit Corporation or the designees of either of them.* (a) The maximum prices established by § 1334.51 shall be applicable for purchases and sales of direct-consumption sugar for Defense Supplies Corporation, Commodity Credit Corporation, the designee or designees or either of them or other United States governmental agency duly authorized to perform functions in connection with sugar exercised by either of them except: (1) In case of purchases by any of the above specified where such maximum prices are below the sellers cost for such sugar, application may be made and the Administrator may grant maximum prices for the sale and purchase thereof in excess of the maximum prices set out in said section. (2) In cases where the seller was not subject to the provisions of § 1334.51 prior to March 31, 1942, the differentials for grades and packages, and the cartage rates of

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his nearest freightwise primary distributor shall be used. (3) Application may be made and approval granted by the Administrator for sales by any of the above specified parties and the purchase from any of them at maximum prices in excess of the maximum prices established by said section, and (4) The above specified parties may enter into valid contracts providing for payment of a price to be adjusted not to exceed the maximum price established by the Office of Price Administration effective at the time of shipment.

(b) All maximum prices with conditions and rights of designation established for purchases and sales of the Defense Supplies Corporation are hereby established for the Commodity Credit Corporation and shall henceforth apply to other United States governmental agencies duly authorized to perform functions in connection with sugar exercised by either of them.

This amendment shall be effective as of December 15, 1942.

(Pub. Laws 421 and 729, 77th Cong.; E.O. 9250, 7 F.R. 7871)

Issued this 7th day of May 1943.

PRENTISS M. BROWN,
Administrator.

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*Copies may be obtained from the Office of Price Administration.

Mr. J. J. Munson

Mr. J. J. Munson, well known technical engineer of the South Coast Corporation, has been elected the new president of that organization. Mr. Munson succeeds Mr. Carl Dahlberg, whose untimely death was recently recorded.

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Food at War

(By A. W. Dykers)

Food will win the War. This is the unanimous opinion of the experts in Washington. The following comments on the food situation have been gleaned from reports appearing in the press.

More Territory

The marketing territory which can be served by the New Orleans sugar refiners was expanded on April 29th to include northwestern Georgia, eastern Texas, eastern Tennessee, and Kentucky as well as Indiana and Ohio. This expansion was made necessary, according to the O.P.A., because of the decrease in arrivals of raw sugar at eastern ports from the Caribbean areas and the heavy demand on stocks for military and lend-lease purposes.

More Sugar

A ten per cent increase in the allotment of sugar for Orleans Parish was granted on May fifth by the O.P.A. because of the increase in civilian population and the requirements of military establishments. Nine other Louisiana parishes also received increases. These are Beauregard, 15 per cent increase; Calcasieu, 30 per cent increase; East Baton Rouge, 30 per cent increase; Jefferson, 20 per cent increase; LaSalle, 20 per cent increase; Ouachita, 10 per cent increase; Rapides, 40 per cent increase; St. Mary, 10 per cent increase; and Vernon, 90 per cent increase. (This does not mean an increase in the ration per individual.)

Sugar For Canning

Twenty-five pounds of sugar has been fixed by the O.P.A. as the maximum amount that can be obtained for the canning and preserving of seasonal fruits and berries during the year starting March 1st, 1943 and ending February 29th, 1944. This announcement was made on May 1st. Each customer will be allowed one pound of sugar for each four quarts of canned fruits and up to five pounds for making jams, jellies, preserves and fruit butters. War Ration Book No. 1 must be presented to the local rationing board in making application for the additional sugar and if a consumer has already obtained an extra sugar allotment since March 1st, this amount will be deducted from the 25 pound limit.

Potato-Ceiling

Potato growers of Louisiana who grade or sack potatoes for buyers loading their own trucks at the farm are subject to O.P.A. ceiling prices and are not permitted to charge more than $2.50 per 100 pounds. This announcement was made on May 5th by the O.P.A. office in Dallas. According to the O.P.A. ruling the grower is classed as a country shipper if he grades and sacks potatoes in connection with sales to buyers. Whether the farmer or the buyer performs the labor of loading the potatoes on the buyer's truck at the farm has no bearing on the classification.

$26,100,000 Provided

President Roosevelt signed a bill on April 30th providing for an appropriation of $26,100,000 to finance a land army to meet farm labor shortages in various parts of the country. The labor will be recruited and assigned largely by state and federal extension services.

PARTNERS IN VICTORY

The next time you hear a friendly bomber overhead, look up . . . and remember that the brave lads who fly and fight in that plane are depending on you to back them up.

On the shoulders of every American farmer rests the great responsibility of raising tremendous quantities of food and fiber . . . not only for our own fighting forces, but for all the brave United Nations whose lands have been devastated by our enemies.

Victory in this war is not a question of manpower, but a matter of food, supplies and equipment. Today, every piece of mechanized equipment is sorely needed to speed up production.

Good fuel and top quality lubricants can go far toward keeping your trucks, tractors and other machinery in fighting trim. Call on your friendly Magnolia Agent for Mobiloil, Mobilgas, Mobilgreases and other dependable Magnolia Products.

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THE SUGAR BULLETIN

Entered as second-class matter April 13, 1925, at the post office at New Orleans, La., under Act of March 6, 1879.

We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., JUNE 1, 1943 No. 17

Airplane Dusting of Sugarcane with Synthetic Cryolite for Control of Second-Generation Borers

By J. W. Ingram, E. K. Bynum, W. E. Haley, and L. J. Charpentier, U. S. Department of Agriculture, Agricultural Research Administration, Bureau of Entomology and Plant Quarantine

In 1942, an airplane belonging to the Bureau of Entomology and Plant Quarantine was used for one large-acreage experiment on Southdown Plantation, Houma, La., and for another on Georgia Plantation, Mathews, La., for the control of the second-generation of the sugarcane borer, *Diatraea saccharalis* (F.). Since the shortage of ground dusting equipment has resulted in increased interest in airplane dusting to control sugarcane borer in the 1943 crop, the results of these experiments are given at this time.

Experiments cooperatively conducted by the Bureau of Entomology and Plant Quarantine, United State Department of Agriculture, and the Louisiana Agricultural Experiment Station since 1937 have shown that the ground dusting of sugarcane with cryolite for the control of either first- or second-generation borers has given rather good results (1) (2) (3). The above agencies conducted an experiment in airplane dusting to control first-generation borers in 1939 (3). It was apparent from this experiment that since sugarcane plants are quite small at the time of dusting for the first generation, a much smaller portion of the dust applied from an airplane falls on them than is the case when it is applied with ordinary power dusters having the nozzle or nozzles located directly above the plants. For this reason, and also because of the fact that in this experiment dust was applied only three times instead of the recommended four, the degree of control obtained was much lower than that usually obtained from ground dusting.

Ground dusting for first-generation borer control can be done with comparatively little difficulty when power dusting machines are available. It is more difficult, however, to dust from the ground for the control of second-generation borers. These begin to appear late in June, and the cane is so high at that time that it is necessary to increase the clearance of the power machines so as not to break it over. Usually some breakage of the cane results from the last dustings, and since the fields at that time are often muddy from heavy rains, growers do not like to cut up the soil with the dusters after the crop has been laid by. It is also very difficult to dust a large acreage with hand-operated dusters at that time. Consequently, it appears that airplane dusting may offer the best method of dusting large acreages for control of the second-generation borer.

In the experiments in 1942, a total of 121 acres of sugarcane on Southdown Plantation, 14.4 acres on the Federal Experiment Station property, and 47.8 acres on Georgia Plantation were dusted four times by airplane to control second-generation borers. The dust was applied by an airplane flying at a height of 3 to 5 feet above the cane, the dust cloud covering a 30-foot swath. The dust was applied in all cases early in the morning while the air was still and dew was on the plants. Data on rate of application and time required for the dusting are given in table 1. At the Southdown and Georgia Plantations there was rain on 17 days during the period of the dustings, a total of 13.76 inches falling at the former and 9.05 inches at the latter place. Four thousand pounds of the cryolite used in these experiments were furnished by the Aluminum Ore Company.

It is estimated that because of hopper leakage only about 11 pounds of cryolite per application actually

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Marcel J. Voorhies, Editor

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reached the cane. The entire acreage on Georgia Plantation was dusted on one trip, but two trips were required to dust at Southdown. Two cuts of cane on the Southdown and one on the Georgia Plantation were dusted with hand guns for comparison of ground dusting with airplane dusting. The dust in these three cuts was applied at the rate of 10 pounds per acre per application. Both airplane and hand dusting caused a small amount of leaf burning on some varieties, but this injury soon disappeared and apparently caused no decrease in growth.

One hundred stalks were examined in each dusted and check area about 3 weeks after the dusting was completed and again at harvestime. The results of these examinations are given in tables 2 and 3. Weights were obtained from some of the most comparable areas in these two experiments and results are listed in tables 4 and 5.

It may be seen from table 2 that on Southdown Plantation a control of 59.9 percent was apparent shortly after the completion of airplane dusting, and a harvesttime control of 42.1 percent was obtained in the entire experiment. In commercial cane on Southdown Plantation, a control of 46.8 percent was apparent at harvesttime. Control obtained by hand dusting of 41.2 percent was apparent shortly after dusting and 34.3 percent at harvesttime. It may be seen from table 4 that there was an average gain of 7.996 pounds of cane per acre in C.P. 29/320 and 4,194 pounds of cane per acre in Co. 281. There was also, undoubtedly, a higher percentage of sucrose in the dusted areas, since lowered infestations in other experiments have resulted in higher sucrose content.

On Georgia Plantation, as may be found from table 3, there was 20 percent less stalks bored in the dusted area after the dusting, and a control of

TABLE 1.—Date and rate of application and time required for airplane dusting with synthetic cryolite for second-generation sugarcane borer control on Southdown and Georgia Plantations, Louisiana, 1942.

Application	Southdown Plantation			Georgia Plantation		
	Date	Poundage per acre	Time required for 121 acres	Date	Poundage per acre	Time required for 47.8 acres
			Hr. Min.			Min.
First	June 24 and 27	10.8	1 33	June 27	11.1	45
Second	July 7	11.1	1 25	July 7	10.8	43
Third	July 13	13.2	1 32	July 13	12.4	50
Fourth	July 20	12.4	1 29	July 20	12.4	50
AVERAGE		11.9	1 30		11.7	47

TABLE 2—Results of airplane dusting experiments with synthetic cryolite for second-generation borer control on Southdown Plantation, Houma, La., 1942.

Location and Variety	Dusted area		Non-dusted area	
	Percent stalks bored shortly after dusting	Percent joints bored at harvest	Percent stalks bored shortly after dusting	Percent joints bored at harvest
Near Manor house—				
C.P. 28/19 summer-plant	11.0	16.4	58.0	25.7
C.P. 29/320 stubble	15.0	8.3	15.0	11.3
Co. 281	6.0	6.6	28.5	17.8
Seed cane plots—				
Co. 281	13.0	11.2	36.0	29.4
In horseshoe—				
C.P. 29/320 plant cane	18.5	18.4	34.0	24.7
Co. 281 plant cane	20.5	13.0	38.0	29.7
Experiment Station—				
Co. 290		12.1		15.7
Co. 281		13.3		20.8
C.P. 28/19		12.1		17.2
Average for entire experiment	14.0	12.4	34.9	21.4
Average for commercial field alone		12.3		23.1
Average of 2 hand-gun-dusted fields not included in the above	19.0	15.5	32.3	23.6

TABLE 3—Results of airplane dusting experiment with synthetic cryolite for second-generation sugarcane borer control on Georgia Plantation, Mathews, La., 1942.

Dusted areas					Check areas			
		Dead hearts per acre before dusting	Percent stalks bored after dusting	Percent joints bored at harvest-time		Dead hearts per acre before dusting	Percent stalks bored after dusting	Percent joints bored at harvest-time
C. P. 29/320								
Tier	Cut				North cut 1st tier	421	87	43.6
2	2	468	60	24.1	South cut 1st tier	357	75	43.7
2	4	630	73	22.6				
3	2	1,118	53	21.4	Back of dusted tier 4			
3	4	740	60	26.7				
4	2	887	72	33.5	cut 1			59.0
4	4	496	74	31.5	cut 3			52.7
Average		723.1	65	26.6	Average	389	81	49.8
Co. 281								
Cut	1	341	37	21.6	Cut 2	497	70	37.1
C. P. 29/116								
Cut	1	216	42	18.7	Cut 2	320	62	24.9
AVERAGE FOR THE 3 VARIETIES DUSTED BY AIRPLANE								
		426.7	48	22.3		402	71	37.3
Hand-dusted cut		389	60	26.3				
AVERAGE FOR ALL CUTS IN EXPERIMENT								
		612	58.8	25		398.8	73.5	43.5

TABLE 4—Yields of sugarcane dusted by airplane with synthetic cryolite for control of second-generation sugarcane borers in the horseshoe area on Southdown Plantation, Houma, La., 1942.

Dusted area			Check area		
Cut number	Acreage	Cane per acre pounds	Cut number	Acreage	Cane per acre pounds
C. P. 29/320					
10	0.59	40,497	2 to 5	2.63	30,433
11	0.67	34,807	6	0.59	45,334
12	0.61	37,303	7	0.63	45,927
13	0.64	43,508	8	0.67	43,134
14	0.54	69,667	9	0.61	41,311
15	0.57	48,175			
Average	3.62	44,998	Average	5.13	37,002
Co. 281					
5	1.36	50,015	1	1.22	50,040
6	1.43	45,510	2	1.37	46,146
7	1.35	51,120	3	1.44	47,013
8	1.35	55,178	4	1.29	41,674
Average	5.49	50,383	Average	5.32	46,189

Gain in dusted area: C. P. 29/320....7,996 pounds of sugarcane per acre
Co. 281.....4,194 pounds of sugarcane per acre

TABLE 5—Yields of sugarcane dusted by airplane with synthetic cryolite for control of second-generation borers in C. P. 29/320 sugarcane on Georgia Plantation, Louisiana.

Location		Treatment	Date milled	Brix Percent	Sucrose Percent	Tons of cane per acre	Pounds of sugar per acre
Tier	Cut						
1	2	Not dusted	Dec. 14	15.66	11.41	23.92	3461.2
	3	Dusted	Dec. 15	16.25	12.07	25.28	3918.4
	4	Not dusted	Dec. 15	15.37	11.13	24.15	3395.5
1	1 and 2, 4–7	Not dusted	Dec. 15	16.05	11.87	23.99	3646.5
2	4–7	Dusted	Dec. 14	15.95	11.72	25.15	3757.4
4 and 5		Dusted	Nov. 4-7	15.64	11.61	21.90	3263.1
6*		Not dusted	Nov. 29–Dec. 3	16.11	11.71	17.98	2666.4
AVERAGES		Dusted		15.95	11.80	24.11	3646.3
		Not dusted		15.80	11.53	22.51	3292.4

*Consisted of 30.51 acres of C. P. 29/320 and 5.46 acres of C. P. 29/116.

42.5 percent was apparent at harvesttime. In table 5 are given harvest data for the experiment. There was an increase of 490 pounds of sugar per acre in tier 1 as a result of dusting; an increase of 111 pounds per acre in tier 2 and 597 pounds per acre in tiers 4 and 5 compared with tier 6. This gives an average gain of 399 pounds of sugar per acre for the dusted areas over the nondusted areas in this experiment. The cane in tiers 4 and 5 was cut from 3 to 5 weeks earlier than any other cane in the experiment. Had this cane been cut at the same time as other cane in the experiment the sucrose and tonnage would, undoubtedly have been higher.

Seeding variety canes composed a part of the area dusted in the plots of the Federal Experiment Station. It is of interest to note that in spite of the fact that the average borer infestation for the State in 1942 was one of the highest on record, borer injury in these seedling canes appeared to be the lowest since 1936. In these test fields, Co. 281 is planted at intervals for comparison with the seedlings. The average percentages of joints bored in the State compared with Co. 281 planted at intervals in the seedling test field are: 1936—8.7 and 7.4, 1937—16.1 and 32.6, 1938—15.9 and 21.1, 1939—19.7 and 27.7, 1940—5.3 and 14.3, 1941—20.2 and 21.1, and 1942—over 22 and 12.9. It appears from these records that dusting with cryolite must have greatly reduced the infestation in the seedling varieties.

Results of the airplane dusting experiments on Southdown and on Georgia Plantations in 1942 indicate that the airplane dusting is fully as effective as ground dusting in applying cryolite as a control for second-generation sugarcane borers.

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(3) Ingram, J. W., and A. L. Dugas, 1941. A summary of recent investigations of sugarcane borer control with cryolite and other insecticides. *Sugar Bulletin*, Vol. 20, No. 4, pp. 27-29.

Eastern Club Meets

The regular monthly meeting of the Louisiana Sugar Producers' Club (Eastern Division) was held in Donaldsonville on May 13th. Those present were:

J. T. Landry, Vice-President, Supreme Factory
K. G. Wilbert, Myrtle Grove Factory
Ivan M. Wilbert, Myrtle Grove Factory
William McCollam, Laurel Grove Factory
Lynn J. Boudreaux, Laurel Grove Factory
L. C. Bourgeois, Jr., Smithfield Factory
Thomas L. Carmouche, Glenwood Factory
B. Thibaut, Glenwood Factory
H. J. Gravois, Westover Factory
Francis H. James, Salsburg Factory
C. J. Tucker, Armant Factory
A. J. Isacks, Southdown Factory
Ralph F. Brou, Salsburg Factory
Sabin J. Savoie, Lula Factory
Dubourg Thibaut, Evan Hall Factory
A. C. Simoneaux, Evan Hall Factory
C. S. Churchill, Evan Hall Factory
Chester A. Brock, St. Louis Factory
Irving E. Legendre, Leighton Factory
P. A. Kerne, Jr., Leighton Factory
John F. Boudreaux, Leighton Factory
Edward J. Gay, St. Louis Factory
Felix H. Savoie, Westfield Factory
Frank L. Barker, Valentine Factory
George M. Murrell, Tally-Ho Factory
F. W. Berthelot, Little Texas Factory
Irving N. Arceneaux, Little Texas Factory
George G. Keen, Magnolia Factory
Louis L. Arceneaux, Little Texas Factory
John C. Burden, Little Texas Factory
George C. Pitcher, Alma Factory
E. N. Kearny, New Orleans, La.
W. C. Byrne, New Orleans, La.
W. E. McFarland, Reserve Factory
Robert C. Martin, Napoleonville, La.
Michel F. Schexnayder, Welcome, La.
Paul S. Melancon, Welcome, La.
Wilmer Chase, Raceland, La.
A. R. Wurtele, New Roads, La.
W. J. Stebbins, Garyville, La.
Eaton M. Summers, Houma Federal Station
Moore, Valois, County Agent, Napoleonville, La.
C. B. Gouaux, L.S.U. Baton Rouge, La.
W. M. Grayson, AAA Baton Rouge, La.
E. S. Landry, County Agent, Donaldsonville, La.
Dr. H. L. McCracken, L.S.U. Baton Rouge, La.
I. L. Forbes, L.S.U. Baton Rouge, La.
Lester G. Davidson, Houma Federal Station
A. E. Camus, County Agent, Port Allen, La.
Harold T. Barr, L.S.U. Baton Rouge, La.
Paul G. Borron, Jr., Plaquemine, La.
Marcel J. Voorhies, New Orleans, La.

Dr. H. L. McCracken, of Louisiana State University, was introduced by Mr. J. T. Landry, presiding. Dr. McCracken described the physical set-up of the War Labor Board Committee on sugar and allied industries which met in New York City in January. He said that the processor representatives, except the one from Louisiana, all stated that they were tired of competing with cheap Louisiana labor, but that the reports on the cost of living presented to the Committee were all based on studies in metropolitan areas, no information on the cost of living in the rural areas being presented.

With regard to perquisites Dr. McCracken stated that perquisites, even though opposed by organized

labor who insist on full wages in cash, can be established, can be evaluated and are legal. He stated that some commodities of equal quality can be made available to the labor consumer cheaper than by forcing an exchange of dollars for commodities. However, the evaluation must be undertaken by the industry and must be relatively uniform and fair and equitable.

Mr. Landry thanked Dr. McCracken for his helpful discussion and requested the committee, of which Mr. McNeil is chairman, to continue its efforts to bring about an evaluation of perquisites in the Louisiana sugar industry.

Mr. Harold T. Barr of Louisiana State University reported on a conference a number of sugar producers had with Col. Atherton Richards regarding the flame cultivator. It was brought out that a process patent has been applied for and may be granted on the flame cultivator.

Mr. Paul Borron, attorney for the American Sugar Cane League, briefly discussed the statute of wage adjustments and the contacts he has had with the Regional Office of the W.P.B. in Dallas regarding these adjustments.

Official Determination (U. S. Beet Wages)

Determination of Fair and Reasonable Wage Rates for Persons Employed in Production, Cultivation, or Harvesting of 1943 Crop of Sugar Beets

Whereas, section 301 (b) of the Sugar Act of 1937, as amended, provides, as one of the conditions for payment to producers of sugar beets and sugarcane as follows:

(b) That all persons employed on the farm in the production, cultivation, or harvesting of sugar beets or sugarcane with respect to which an application for payment is made shall have been paid in full for all such work, and shall have paid wages therefor at rates not less than those that may be determined by the Secretary to be fair and reasonable after investigation and due notice and opportunity for public hearing; and in making such determination the Secretary shall take into consideration the standards therefor formerly established by him under the Agricultural Adjustment Act, as amended, and the difference in conditions among various producing areas: *Provided, however,* That a payment which would be payable except for the foregoing provisions of this subsection may be made, as the Secretary may determine, in such manner that the laborer will receive an amount, insofar as such payment will suffice, equal to the amount of the accrued unpaid wages for such work, and that the producer will receive the remainder, if any, of such payment.

And whereas, the Secretary of Agriculture, pursuant to a notice of hearing, dated February 15, 1943, held public hearings for the purpose of receiving evidence likely to be of assistance to him in determining fair and reasonable wage rates for persons employed in the production, cultivation, or harvesting of the 1943 crop of sugar beets.

Now, therefore, I, Claude R. Wickard, Secretary of Agriculture, after investigation and due consideration of the evidence obtained at the aforesaid hearings and all other information before me, do hereby make the following determination:

Fair and reasonable wage rates for persons employed in the production, cultivation, or harvesting of the 1943 crop of sugar beets. Fair and reasonable wage rates for persons employed in the production, cultivation, or harvesting of the 1943 crop of sugar beets shall be as follows:

For any farm or part of a farm, which is covered by a separate labor agreement, from which sugar beets are contracted to be delivered to factories located in the following districts:

(a) *Fair and reasonable wage rates for the 1943 crop of sugar beets.* (See table on opposite page.)

(b) *Provided, however:*

(1) That in instances where inexperienced workers or workers between 14 and 16 years of age are employed on a time basis, the fair and reasonable rate per hour shall be:

(i) For inexperienced workers during a reasonable training period, three-fourths of the hourly rate specified herein for the operation to be performed:

(ii) For workers between 14 and 16 years of age, two-thirds of the hourly rate specified herein for the operation to be performed. (Employment of such workers not to exceed 8 hours per day.)

(2) That in an instance in which the use of a special machine method of planting, cultivation, or harvesting (other than specified under item 3 below) reduces the amount of labor required as compared with the method in previous use, the fair and reasonable rate for the operation involved shall be the rate agreed upon between the producer and the laborer, provided such rate is determined by the State Committee as equivalent to the piece rate specified herein for the part of such work performed:

(3) That in instances where segmented or sheared seed is used in planting and the amount of labor for blocking and thinning is reduced because no hand thinning is required (as compared to the amount of labor where hand thinning is required), the fair and reasonable piece rate for blocking and thinning shall be 75% of the rate specified herein or the rate agreed upon, whichever is higher;

(4) That if the producer and the laborer agree upon a wage rate for any operation or a combination of operations higher than that prescribed herein, payment in full of the amount agreed upon must be made to qualify the producer for payment;

(5) That the wage rate for any work in the production, cultivation, or harvesting of sugar beets for which a rate is not specifically provided herein, shall be the rate agreed upon between the producer and the laborer;

(6) That if the producer and the laborer agree in writing that the laborer is to receive the combined rate specified herein for blocking, thinning, hoeing, and weeding, for all such work in the production and cultivation of the crop regardless of the number of hoeings or weedings required, the payment of this amount will be deemed to meet the requirements of this determination with respect to such work;

(7) That in addition to the foregoing, the producer shall furnish to the laborer, without charge, the perquisites customarily furnished by him, such as a house, garden plot, and similar incidentals; and

(8) That the producer shall not, through any subterfuge or device whatsoever, reduce the wage rates to laborers below those determined above.

Done at Washington, D. C., this 7th day of April 1943. Witness my hand and the seal of the Department of Agriculture.

CLAUDE R. WICKARD,
Secretary of Agriculture.

[SEAL]

WAGE DISTRICTS

Operation	I Ohio, Michigan, Indiana and Wisconsin	II Minnesota and Iowa	III Nebraska, Colorado, Kansas and Southern Wyoming	IV South Dakota	V Southern and Eastern Montana, Northern Wyoming	VI Western Montana	VII Northern Montana	VIII Utah, Idaho and Oregon	IX Washington	X Southern California [3]	XI Northern California [4]
Blocking and thinning:											
On a time basis: Per hour	$0.50		$0.50	$0.55	$0.55	$0.55	$0.55	$0.50	$0.55	$0.50	$0.55
On a piece rate basis: Per acre	$12.00	12.00	12.00	13.00	13.00	12.00	13.00	11.00	11.00	10.00	11.00
First hoeing:											
On a time basis: Per hour	.45		.45	.50	.50	.50	.50	.45	.50	.45	.50
On a piece rate basis: Per acre	3.00	3.50	3.50	3.50	4.00	4.50	4.00	3.50	3.50	3.50	3.50
Second and each subsequent hoeing or weeding:											
On a time basis: Per hour	.45		.45	.50	.50	.50	.50	.45	.50	.45	.50
On a piece rate basis: Per acre	2.00	2.50	2.50	2.50	3.00	3.50	3.00	2.50	2.50	2.50	2.50
Blocking, thinning, hoeing, and weeding as a combined operation: Per acre	17.00	[1]18.00	18.00	19.00	20.00	20.00	20.00	17.00	17.00	16.00	17.00
Harvesting:											
On a time basis: Per hour	.60		.60	.65	.65	.65	.65	.60	.65	.60	.65
On a piece rate basis: Per ton:*											
Net tons per acre		Pulling, Piling, Topping						Pulling, Topping, Loading			
3 or below	2.04	$1.35 for each ton up to and including 7 tons per acre plus $1.15 for each ton per acre above 7 tons, with a minimum guarantee of $8.10 per acre.	$1.25 for each ton up to and including 12 tons per acre plus $1.25 for each ton per acre above 12 tons.	$1.25 for each ton up to and including 12 tons per acre plus $1.25 for each ton per acre above 12 tons.	$1.25 for each ton up to and including 12 tons per acre plus $1.15 for each ton per acre above 12 tons.	$1.25 for each ton up to and including 12 tons per acre plus $1.15 for each ton per acre above 12 tons.		(2)	Pulling and topping: $1.05 per ton. Loading: 40 cents per ton.		
4 (or below for Districts X and XI)	1.81									3.01	3.11
5	1.63									2.64	2.74
6 (or below for Districts VII and VIII)	1.53						1.89	1.89		2.33	2.43
7	1.46						1.80	1.80		2.11	2.21
8	1.41						1.72	1.72		1.95	2.05
9	1.38						1.64	1.64		1.83	1.93
10	1.35						1.58	1.58		1.73	1.83
11	1.32						1.53	1.53		1.64	1.74
12 (or above for District VII)	1.30						1.50	1.49		1.57	1.67
13	1.28							1.45		1.51	1.61
14	1.26							1.41		1.45	1.55
15	1.24							1.39		1.40	1.50
16 (or above for District I)	1.22							1.37		1.35	1.45
17								1.35		1.31	1.41
18 (or above for District VIII)								1.34		1.28	1.38
19										1.25	1.35
20										1.24	1.34
21										1.23	1.33
22										1.22	1.32
23										1.21	1.31
24										1.20	1.30
25 (or above for Districts X and XI)										1.19	1.29

*The rate for all fractional tonnages rounded to the nearest tenth of a ton shall be in proportion within each interval.

[1] In District II the combined rate for mechanically blocked fields shall be $16 per acre and for mechanically blocked and cross-cultivated fields the rate shall be $14.50 per acre.

[2] When topping and loading are performed by different persons, 70 percent of the rates shall be paid for topping and 30 percent of the rates shall be paid for loading.

[3] Applicable to farms located in the following counties: Madera, Fresno, Tulare, Kings, Kern, San Luis, Obispo, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego, Imperial.

[4] Applicable to farms located in counties in California other than those specified in footnote (3).

Mr. Bourg Resumes the Helm

It is gratifying to be able to say that Mr. Clarence J. Bourg, manager of the American Sugar Cane League's Washington office, who has been in Louisiana for two or three weeks recuperating from illness, was able to return to Washington on May 30th. While not entirely restored to health and vigor, Mr. Bourg showed very marked improvement and now gives every indication of becoming his usual active self in a very short time. Like an old fire engine horse he was beginning to grow restless and chafed out of harness and it is believed that he will be benefitted by getting back into it under certain reasonable restrictions. Even these will in due time be removed.

While in Louisiana Mr. Bourg, who was accompained by his wife and youngest child, got a fine rest at the summer home of Mr. Frank L. Barker's family at Grand Isle and at the beautifully furnished little cottage of Mr. J. W. Jay at Valentine plantation on Bayou Lafourche.

The best tonic that could be administered to him was the liberal and universal praise he received while in Louisiana for the long and faithful services he has rendered in Washington in behalf of the Louisiana sugar industry.

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Food at War

(*By A. W. Dykers*)

Food will win the War. This is the unanimous opinion of the experts in Washington. The following comments on the food situation have been gleaned from reports appearing in the press.

Limit Corn Sales

The rapid dwindling of feed supplies under the record wartime livestock program has prompted the War Food Administration to take steps to prevent hoarding of corn by feeders, feed mixers and manufacturers. An order directing that purchases and deliveries of corn by manufacturers and feed mixers be limited to a 45 day supply, and to a 90 day supply by feeders, including stocks on hand, was issued on May 5th by the WFA to prevent an accumulation of corn by one user at the expense of the other users.

Steel Granted

The Times-Picayune Washington Bureau reported on May 9th that priorities for the steel necessary to construct 55 additional sugar cane harvesters have been granted by the War Production Board. The steel is in addition to the amount allowed for this year's regular quota of harvesting machines.

More Coffee

Coffee stamp number 24 in War Ration Book No. 1, becomes valid on May 31 and is good for one pound of coffee through June 30, a period of one month instead of the five weeks that have constituted the coffee ration period heretofore. This should be good news to the coffee drinkers of south Louisiana.

Poultry

(Goals: Eggs, 8% increase over 1942, Chickens 9% increase over 1942)

The poultry problem for 1943 is better care and management for increasing the number of eggs produced per hen with what we now have. The kind of chicks to be hatched, time of hatching, care and management for maximum production are of vital importance in our Food for Freedom Program.

Eggs

The 1943 production goal for eggs is 4,780 million dozen, which is 53 percent increase over the 5-year, 1936-1940, average production and is 8 percent increase over the 1942 production. At least 26 percent, or 1,220 million dozen, will go for military or lend-

MEETING SCHEDULED

A meeting of the Contact Committee of the American Sugar Cane League and scientists of the Louisiana Agricultural Experiment Station and the Houma U.S. D.A. Sugar Station will be held in the New Iberia Court House on Tuesday, June 15th at 10:30 A.M.

Dr. E. W. Brandes of the Bureau of Plant Industry will visit Louisiana and will be present at this meeting.

All sugarcane farmers are requested and urged to be present to hear, and participate in, the new seed cane discussions which will be conducted.

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lease purposes. The war effort demands that every Southern farmer produce at least enough eggs for his own family needs, and, in addition, sell as many as possible.

Milk

The 1943 production goal for milk is 122 billion pounds, which is 16 percent increase over the 5-year, 1936-1940, average production and is a small increase over the record production of 1942. At least 14 percent, or over 18 billion pounds, of milk will go to fill military and lend-lease needs. It is important that every farmer produce his own family milk supply, and, in addition, sell as much as possible.

Extra Sugar

Stamps number 15 and 16 in War Ration Book No. 1 have been designated by the O.P.A. as extra sugar stamps and are good for five pounds each for canning purposes until October 31st of this year. This latest ruling supersedes the previous plan of applying to local boards for the extra canning sugar. Families who require more than ten pounds of sugar per person for home canning may apply to their rationing board for more sugar. The O.P.A. estimates that the ten pounds per person extra allowance should provide each person in the United States with an average of 40 quarts of canned goods.

Stamp No. 13

Sugar stamp No. 13 in War Ration Book No. 1 becomes valid today, June 1st, and will be good for five pounds of sugar through August 15. This maintains the current ration of five pounds of sugar per person for a period of 2½ months, or just under 11 weeks. The value of stamp number 13 is set in Amendment 61 to Ration Order No. 3, effective May 31st, 1943.

The American Sugar Cane League of the U. S. A., Inc., will honor *Dr. E. W. Brandes, Mr. W. G. Taggart,* and *Mr. B. C. Thomson* with *HONORARY LIFE MEMBERSHIPS* in the League at 6:30 P.M. on *WEDNESDAY, JUNE* 16th, 1943 in the *HIGH SCHOOL BUILDING* at *HOUMA, LA.*

A *DUTCH-TREAT SUPPER* will be provided and all members of the American Sugar Cane League are invited to participate.

Make your reservations by advising Mr. Marcel J. Voorhies, 414 Whitney Building, New Orleans 12, La., not later than *SATURDAY, JUNE* 5th, 1943.

Blue Stamps

To avert an end of the month buying rush the O.P.A. has extended the expiration date of blue stamps G, H, and J. in War Ration Book No. 2 through June 7th. The O.P.A. at the same time made the next three sets of blue stamps K, L, and M, good beginning Monday May 24th and extended their expiration date from the end of June till July 7th.

Red Stamps

Four sets of red stamps in War Ration Book No. 2 become valid on May 30th and will be good for the purchase of meats, cheeses, oil and fats through June 30th. These stamps fall due as follows: K, May 30th, L, June 6th, M, June 13th, and N, June 30th. Red stamp J, which became valid May 23, is also good through June 30th.

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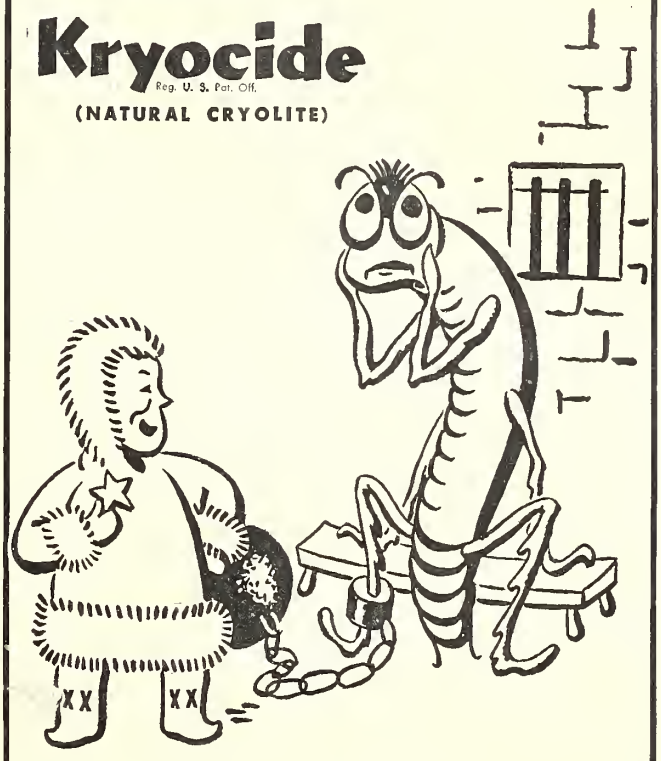

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THE SUGAR BULLETIN

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THE SUGAR BULLETIN

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Marcel J. Voorhies, Editor

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in which are consolidated

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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.

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NOTICE TO ALL MEMBERS OF THE AMERICAN SUGAR CANE LEAGUE

The American Sugar Cane League will honor Dr. E. W. Brandes, Mr. W. G. Taggart and Mr. B. C. Thomson with Honorary Life Memberships in the League, at 6:30 P.M., on Wednesday, June 16, 1943, in the High School Building at Houma, La.

The Arrangements Committee of Messrs. D. W. Pipes, Jr., J. J. Munson, and J. J. Shaffer, Jr., under the Chairmanship of Mr. Pipes, repeats its invitation to all members of the American Sugar Cane League to attend this testimonial meeting and participate in the Dutch Treat supper that has been arranged.

Revision of Report to Contact Committee By Department of Plant Pathology

PART I. Mosaic and Red Rot Studies

I. L. Forbes and P. J. Mills.

In this report are included: I. The results of field tests conducted at Baton Rouge during the past two years to determine the response of the commercial varieties and more promising seedlings to mosaic and red rot. II. Results of tests to determine the relative susceptibility of commercial varieties and new seedlings to red rot. III. Results of roguing for mosaic control in Co. 281 seed plots.

I. *Results of field tests*: As in the past, tests in the field were made to determine the effects of mosaic and red rot on the different commercial varieties and promising seedlings. The mosaic tests were conducted by planting plots with mosaic and mosaic-free seed cane. The red rot tests were conducted in plots planted with field run seed cane and with cane inoculated at planting time with red rot. The yield data were analyzed and the losses due to mosaic are summarized in table 1.

TABLE 1. Reduction in yield from mosaic, percent.

Variety	1941	1942
Co. 281	12	17
Co. 290	15	20
C. P. 28-11	16	8
C. P. 28-19	14	20
C. P. 33-243	11	22
C. P. 29-320	3	8

In general, the losses from mosaic in 1942 were greater in 1941. During 1942, the disease seemed to spread faster than in 1941.

The results obtained in the red rot tests are summarized in Table 2.

TABLE 2. Reduction in yield due to red rot, percent.

Type of Resistance	Variety	1941	1942
Susceptible	C. P. 34-79	85	30
Susceptible	C. P. 33-243	90	18
Susceptible	Co. 290	84	7
Intermediate	C. P. 34-120	75	11
Intermediate	C. P. 28-19	41	7
Intermediate	C. P. 29-320	20	3
Resistant	Co. 281	37	2
Resistant	C. P. 28-11	26	0.1
Resistant	C. P. 29-103	10	2
Resistant	C. P. 29-116	33	1.5
Resistant	C. P. 29-120	14	0.4
Unclassified	C. P. 33-310		17
Unclassified	C. P. 33-372		7
Unclassified	C. P. 33-409		2.7
Unclassified	C. P. 34-21		14
Unclassified	C. P. 34-53		15
Unclassified	C. P. 34-54		5
Unclassified	C. P. 34-75		9
Unclassified	C. P. 38-86		40
Unclassified	C. P. 34-92		12
Unclassified	C. P. 34-115		18
Unclassified	C. P. 34-139		7
Unclassified	C. P. 36-55		2
Unclassified	F 31-962		1

The results in Table 2 show several things of interest. (1) The varieties show marked differences in regard to resistance to red rot. (2) The bases for classifying varieties at the Station in regard to red rot are sound. (3) Soil conditions during the winter affect the severity of red rot. This explains why poor stands may occur with susceptible varities in some years and why the Station is reluctant in releasing varieties which are susceptible. (4) Field tests in years unfavorable to red rot do not give satisfactory information in regard to the resistance of varieties to red rot.

II. *Susceptibility of varieties and seedlings to red rot*

In October of 1942, a number of stalks of each of the promising new seedlings were inoculated with red rot. As checks, the commercial varieties Co. 281, C.P. 29-320, C.P. 34-120, C.P. 33-243 were included in the tests. Stalks of each variety were dug at intervals during the winter, split lengthwise, and the extent of red rot determined. The results from the inoculations are given in Table 3.

TABLE 3. Relative susceptibility of sugarcane varieties to red rot, determined by inoculating stalks of cane before planting.

Group *I	Group II	Group III	Group IV
Co. 281	C. P. 29-320	C. P. 38-18	C. P. 33-243
C. P. 34-53	C. P. 36-62	C. P. 36-55	C. P. 34-115
C. P. 36-75	C. P. 36-94	C. P. 36-80	C. P. 34-151
C. P. 36-105	C. P. 34-120	C. P. 36-192	C. P. 36-161
C. P. 36-111	C. P. 32-206	C. P. 36-50	C. P. 37-9
C. P. 36-183			C. P. 34-92
C. P. 36-191			C. P. 36-185
			C. P. 36-17

*Group I—Resistant
Group II—Moderately Resistant
Group III—Moderately Susceptible
Group IV—Susceptible

III. *Results of roguing for mosaic control in Co. 281*

In the fall of 1941, a field of about 1½ acres on the north line of the Sugar Station, and another field of somewhat smaller size on Ben Hur Plantation were planted with seed cane in which mosaic had been "practically" controlled by roguing during 1941. Table 4 is a record of the dates of roguing and the number of stalks, or stools, removed at each date during 1942.

TABLE No. 4

	5-4	5-20	5-28	6-4	6-19	7-2	7-8	7-22	8-1	8-12	8-24	9-8	Total
University	26	22	6	9	16	52	16	36	16	24	9	4	236
	5-4	5-20	5-28	6-4	6-19	7-3	7-9	7-25	8-7	8-20	9-4		Total
Ben Hur Plantation	12	15	1	2	4	22	16	26	40	40	8		186

It is seen from the table that although the percentage infection on May 4, the date of the first roguing, was relatively low, the disease continued to spread rather rapidly throughout the season. A probable explanation for the unusually rapid spread under conditions of such low initial infection is the fact that the 1942 growing season was one of heavy rainfall, conducive to rapid growth of the cane plant. The encouraging fact demonstrated by the experiment was that it is possible to control mosaic in Co. 281, the variety in which the disease is known to spread most rapidly.

PART II. Hot Water Treatment of Sugarcane

P. H. Dunckelman and C. W. Edgerton

In 1937 the Chlorotic Streak disease was first found in Louisiana. This disease had been known in Java and certain other sugarcane producing areas of the world for a long time, and the discovery had early been made that treating diseased stalks in a water bath at 52°C. for 20 minutes eliminated the disease from the seed pieces. Immediately the disease was found in Louisiana, this simple method of control was verified by the Louisiana Agricultural Experiment Station and the results were published. However, this "dipping" of seed cane in hot water not only eliminates the virus of Chlorotic Streak but it also stimulates the cane to germinate more rapidly than normally. With this knowledge at hand it became apparent that planting dates of certain varieties might have to be changed where the hot-water treatment was used to control Chlorotic Streak. Consequently experiments were planned to secure information that could be applied practically in solving this problem. Through the efforts of the American Sugarcane League, a Legislative appropriation was obtained for financing this project. The work was begun in 1940, the experiments being made on nine different plantations, located in different sections of the "Sugar Belt". Previous reports on this project have been made to the Contact Committee of the American Sugarcane League, and in addition, Louisiana Agricultural Experiment Station Bulletin 336, was published in 1942, giving results of two years' experimental work on the hot-water treatment. The present report is a summary of the results obtained from the plant and first stubble crops of 1942.

Experimental Methods: The areas of land selected on the individual plantations for seed treatment plots were in regular plantation rotation—two years in cane alternating with a cover crop of some legume, generally soybeans, with or without corn. The cover crop was turned under about a month in advance of the first planting. Plantings were made in August, September, October and November. Two varieties of cane were used at each plantation, and 4 replications were made of both treated and check plots of each variety at each planting, thus averaging 16 plots per unit or a total of 64 plots per place. Each plot was approximately 1/80 of an acre in size.

The treating procedure was essentially the same at all locations and consisted of submerging the cane in water heated to 52°C. for a period of 20 minutes.

With few exceptions, the method of planting was the same everywhere. All plots, both treated cane and check cane, were planted two running stalks with a lap of 10 to 20 inches. The cane was covered by either disk cultivators or turning plows. All cultivation was done in the regular plantation manner. None of the plots received anything in the way of special treatment.

Test Field Results: The yields obtained from the tests plots of stubble cane on 7 cooperating planta-

TABLE 1. Effect of the Hot Water Treatment on Tonnage. First stubble crop, 1942.*

Plantation	Date of planting 1940	Yield, tons per acre			
		C. P. 29-320		Second Variety**	
		Check	Treated	Check	Treated
Cinclare	Aug. 21	16.37	12.85	2.38	1.14
	Sept. 5	20.84	20.87	5.58	7.38
	Oct. 5	22.77	22.40	8.52	8.74
	Nov. 2	26.87	22.85	11.56	10.76
Albania	Aug. 16	6.29	7.59	6.42	7.39
	Sept. 4	7.35	10.00	11.40	13.53
	Oct. 3	4.30	6.15	4.61	5.50
	Oct. 31	10.54	9.53	11.46	15.99
Raceland	Aug. 15	21.90	22.90	24.76	24.90
	Aug. 30	24.85	27.01	25.58	28.19
	Oct. 2	26.21	28.44	30.48	26.54
	Oct. 30	25.93	26.85	29.37	32.27
Lower Terrebonne	Aug. 26	12.95	10.52	14.17	12.34
	Sept. 11	15.46	19.59	14.96	15.36
	Oct. 9	14.91	18.88	14.49	17.22
	Nov. 8	19.52	16.33	17.02	14.94
Glenwood	Aug. 14	11.04	10.44	12.29	14.92
	Sept. 2	11.11	14.93	12.17	14.28
	Sept. 30	13.71	15.26	11.46	13.61
	Oct. 28	17.99	17.21	7.93	15.63
Greenwood	Aug. 15	7.77	0.27	14.54	10.73
	Aug. 29	13.22	16.61	13.43	20.90
	Oct. 1	16.62	24.24	25.18	26.14
	Oct. 29	14.81	26.88	20.45	25.32
Meeker	Aug. 23	14.99	14.44	18.98	14.99
	Sept. 9	11.85	19.55	19.77	18.87
	Oct. 8	17.54	20.89	25.47	23.25
	Nov. 5	8.05	11.24	13.63	20.78

*No data collected on weight yields at Billeaud and Westover plantations.
**Second variety: C. P. 28-19 at Raceland, Lower Terrebonne, Glenwood, Greenwood, and Meeker: Co. 281 at Cinclare; Co. 290 at Albania.

tions are given in table 1. No weights were obtained on the stubble plots at Billeaud and Westover, due to a breakdown of weighing equipment. The results on plant cane are given in table 2.

TABLE 2. Effect of the Hot Water Treatment on Tonnage. Plant cane crop of 1942.

Plantation	Date of planting 1941	Yield Tons per acre			
		C. P. 29-230		Second Variety*	
		Check	Treated	Check	Treated
Cinclare	Aug. 15	28.03	22.25	20.01	18.89
	Sept. 6	29.68	31.83	19.14	25.41
	Sept. 29	34.19	27.47	26.72	27.98
	Oct. 27	31.50	36.77	21.19	26.77
Albania	Aug. 19	15.06	18.93	26.54	26.74
	Sept. 18	23.27	25.83	30.34	29.68
	Oct. 6	21.42	22.70	25.09	29.24
	Nov. 19	18.48	27.90	31.96	29.94
Raceland	Aug. 5	28.50	26.63	23.77	23.40
	Sept. 5	26.05	23.76	20.87	20.42
	Oct. 13	11.05	13.15	6.56	9.16
	Oct. 28	10.00	13.45	10.00	10.63
Lower Terrebonne	Aug. 11	14.01	15.50	15.96	14.13
	Sept. 10	7.68	11.75	10.05	12.31
	Oct. 9	11.15	16.33	14.21	14.94
	Oct. 29	14.49	14.92	14.94	16.65
Glenwood	Aug. 20	23.93	22.54	26.19	24.25
	Sept. 8	25.33	26.34	28.54	29.38
	Oct. 13	19.27	22.00	16.49	18.13
	Oct. 29	16.54	18.58	15.03	17.83
Greenwood	Aug. 12	33.83	32.63	30.03	32.43
	Sept. 9	31.42	32.78	27.39	30.54
	Oct. 1	28.96	31.38	30.06	35.69
	Oct. 28	27.12	31.85	19.08	28.85
Meeker	Aug. 19	25.49	28.07	32.13	30.12
	Sept. 12	30.95	33.77	28.69	32.31
	Oct. 8	25.97	31.68	29.57	29.28
	Nov. 7	27.21	25.71	30.81	24.36
Billeaud	Aug. 27	27.28	28.50	43.93	35.93
	Sept. 19	21.23	25.10	36.61	36.31
	Oct. 7	22.00	18.64	33.38	32.94
	Nov. 13	21.64	17.04	29.48	13.76
Westover	Aug. 12	31.03	30.84	29.41	27.81
	Sept. 13	26.82	28.33	24.21	22.55
	Oct. 14	21.71	23.91	22.18	25.21
	Oct. 31	19.34	23.99	15.54	19.96

* Second Variety: C. P. 28-19 at Raceland, Greenwood, Glenwood, Westover, Meeker, and Lower Terrebonne; C. P. 29-116 at Billeaud; Co. 290 at Albania; Co. 281 at Cinclare.

In tables 3 and 4 are recorded summation figures of the effects of the hot-water treatment on yields in the Variety C.P. 29-320.

TABLE 3—Summation of the Effect of the Hot Water Treatment on Tonnage, 1940-42 (Variety C. P. 29-320).
Yields in Tons Per Acre. (1st Year Stubble)*

Plantation	August Planting		September Planting		October Planting		November Planting	
	treated	check	treated	check	treated	check	treated	check
Meeker	14.44	14.99	19.55	11.85	20.79	17.54	11.24	8.05
Cinclare	12.85	16.37	20.87	20.84	22.40	22.77	22.85	26.87
Albania	7.59	6.29	10.00	7.35	6.15	4.30	10.54	9.53
Raceland	22.90	21.90	27.01	24.85	28.44	26.21	26.85	25.93
Terrebonne	10.52	12.95	19.59	15.46	18.88	14.91	16.33	19.52
Glenwood	10.44	11.04	14.93	11.11	15.26	13.71	17.21	17.99
Greenwood	.27	7.77	16.61	13.22	24.24	16.62	26.88	14.81
Average	11.29	13.04	18.37	14.95	19.45	16.58	18.84	17.53

*It was not possible to obtain weight data on the stubble test plots at Billeaud and Westover Plantations.

TABLE 4. Summation of the Effect of the Hot Water Treatment on Tonnage, 1941-42 (Variety C. P. 29-320).
Yields in Tons Per Acre. Plant Cane

Plantation	August Planting		September Planting		October Planting		November Planting	
	treated	check	treated	check	treated	check	treated	check
Meeker	28.07	25.49	33.77	30.95	31.68	25.97	25.71	27.21
Cinclare	22.25	28.03	31.83	29.86	27.47	34.19	36.77	31.50
Albania	18.93	15.06	25.83	23.27	22.70	21.42	27.90	18.48
Billeaud	28.50	27.27	25.10	21.23	18.64	22.00	17.04	21.64
Westover	30.84	31.93	28.33	26.82	23.91	21.71	23.99	19.34
Raceland	26.63	28.00	23.76	26.05	13.15	11.05	13.45	10.00
Terrebonne	15.50	14.01	11.75	7.68	16.33	11.15	14.92	14.49
Glenwood	22.54	23.93	26.34	25.33	22.00	19.27	18.58	16.54
Greenwood	32.63	33.83	32.78	31.42	31.38	28.96	31.85	27.12
Average	25.10	25.34	26.61	24.73	23.03	21.75	23.36	20.70

TABLE 5. Stand Counts in Field Tests with Hot Water Treatment. Total number of plants on four plots, each 1/80 acre in size. 1942-1943

Plantation	Date of planting 1942	Date of counts 1942-43 43	Stand Counts			
			C.P. 29-320		Second Variety*	
			Check	Treated	Check	Treated
Westover	Aug. 8	Sept. 5	119	308	163	236
		April 22	1274	1622	1213	1008
	Sept. 2	Sept. 25	46	253	12	263
		April 22	458	761	325	883
	Sept. 28	Nov. 5	159	498	73	381
		April 22	636	968	369	770
	Nov. 5	April 22	282	512	446	479
Raceland	Aug. 15	Oct. 6	756	1395	697	1299
		April 21	1091	1196	582	1026
	Sept. 5	Oct. 6	181	438	267	652
		April 21	896	1112	813	1017
	Oct. 6	Nov. 6	34	217	57	469
		April 21	451	745	371	543
	Nov. 12	April 21	367	472	349	603
Lower Terrebonne	Aug. 11	Sept. 7	311	549	277	394
		April 21	1007	1118	1092	1336
	Sept. 4	Oct. 5	294	581	233	704
		April 21	1106	1247	1390	1717
	Oct. 5	Nov. 11	65	214	47	215
		April 21	288	427	384	614
	Nov. 12	April 21	236	277	368	580
Meeker	Aug. 28	Sept. 25	202	398	396	512
		April 19	945	1439	1458	1804
	Sept. 25	Nov. 3	9	82	68	187
		April 19	284	496	375	566
	Oct. 9	Jan. 4	8	21	31	157
		April 19	207	291	281	429
	Nov. 14	April 19	249	546	460	538
Glenwood	Aug. 18	Sept. 30	394	410	416	478
		April 22	479	443	564	647
	Sept. 8	Oct. 8	332	340	432	378
		April 22	619	669	652	830
	Oct. 8	Nov. 13	22	131	6	186
		April 22	252	488	210	575
	Nov. 6	April 22	330	519	378	464
Albania	Aug. 10	Oct. 2	634	535	699	944
		April 21	1003	706	1141	1446
	Sept. 9	Oct. 22	61	61	78	148
		April 21	359	517	454	477
	Oct. 3	Nov. 10	228	406	109	420
		April 21	641	856	383	780
	Nov. 10	April 21	211	495	186	743
Greenwood	Aug. 14	Sept. 5	144	205	180	397
		April 21	604	795	656	726
	Sept. 7	Oct. 7	230	345	208	469
		April 21	901	879	567	845
	Oct. 14	Nov. 13	5	95	2	82
		April 21	375	544	280	583
	Nov. 7	April 21	352	582	339	633
Cinclare	Aug. 19	Sept. 30	255	277	334	271
		April 19	373	437	242	162
	Aug. 31	Sept. 30	343	451	432	542
		April 19	1075	1403	879	878
	Sept. 28	Nov. 4	213	379	179	364
		April 19	576	703	442	544
	Nov. 5	April 19	343	527	400	602
			C.P. 29-116			
Billeaud	Aug. 17	Oct. 2	473	819	368	589
		April 20	1506	2233	800	1309
	Sept. 2	Oct. 2	377	510	283	352
		April 20	967	1027	500	567
	Oct. 2	Nov. 6	319	603	239	636
		April 20	733	697	531	626
	Nov. 10	April 20	434	428	292	488

* Second Variety: C.P. 28-19 at Westover, Raceland, Lower Terrebonne, Meeker, and Glenwood; C.P. 29-103 at Albania and Greenwood; Co. 281 at Cinclare, and C. P. 29-116 at Billeaud.

Note: C.P. 29-116 used in place of C.P. 29-320 at Billeaud.

Evaluation of Tests:

Although this project is going into its third year, it is not possible yet to make any definite recommendations affecting its employment on a large, widespread scale by the sugar planters. The yield trends, however, recorded in tables 3 and 4, on the stubble and plant cane, respectively, of the variety C.P. 29-320, correspond with results already obtained. The variety C.P. 29-320 was included in all the nine test fields in 1940-1941 and in 1941-1942 and it is perhaps possible to judge how the hot water treatment affected this variety.

In a summation of the effect of the hot water treatment on tonnage of first year stubble of the variety C.P. 29-320, as shown in table 3, there is fairly significant carryover increase in the treated cane, compared to untreated cane, in the September and October plantings, of 3.42 and 2.87 tons per acre, respectively. The November treated cane also shows an increase of 1.82 tons per acre over the non-treated cane. In the August plantings there is an increase of 1.75 tons per acre in favor of the untreated cane, but this is due to an almost total failure of the treated cane plots at Greenwood plantation for the August plantings of the year 1940.

Table 4 gives the results for the plant cane crop of 1942. In the August plantings, as an average of 9 plantations, there was no significant difference between the treated and non-treated cane yields. In the other plantings, the following increases in yield were obtained in the treated plots: 1.88 tons per acre in the Sept. plantings, 1.28 in the Oct. plantings, and 2.66 in Nov. plantings.

These results cannot be considered conclusive, as it is to be recognized that this report takes into consideration the data for a period of only 2 years. Tests are underway again for harvest in the fall of 1943 and it is hoped that further light will be thrown upon the subject. Germination and stand counts made on the 1942 plantings are given in table 5. In most cases the hot water treatment brought about an increase in germination of the eyes.

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Report Covering Louisiana Sugar Experiment Station Outfields - 1942

(By C. J. Gouaux)

Location	Parish	Soil Type	Crop Age
Cinclare	West Baton Rouge	Yazoo	Plant Cane First Stubble Second Stubble
Cinclare	West Baton Rouge	Sharkey	Plant Cane First Stubble
Glenwood	Assumption	Yazoo	Plant Cane First Stubble Second Stubble
Reserve	St. John	Yazoo	Plant Cane First Stubble Second Stubble
Meeker	Rapides	Yahola	Plant Cane First Stubble Second Stubble
Shirley	Avoyelles	Yahola	Plant Cane First Stubble Second Stubble
Sterling	St. Mary	Franklin Series	Plant Cane First Stubble Second Stubble
Billeaud	Lafayette	Lintonia	Plant Cane First Stubble
Youngsville	Lafayette	Olivier	Plant Cane First Stubble

Total Number of Fields: 24

TABLE No. 1—Cinclare Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Yazoo)								
C.P. 34-120	16.05	13.07	81.43	27.02	$4.05	$109.43	$29.72	$79.71
C.P. 28-19	16.76	13.88	82.82	21.08	4.36	91.91	23.19	68.72
C.P. 34-21	15.85	12.70	80.13	23.84	3.91	93.21	26.22	66.99
C.P. 33-425	17.31	14.49	83.71	19.07	4.59	87.53	20.98	66.55
C.P. 34-139	15.69	11.89	75.78	17.86	3.83	84.04	19.65	64.39
C.P. 34-1	16.08	12.80	79.60	21.00	3.94	82.74	23.10	59.64
C.P. 34-53	16.21	13.22	81.55	19.00	4.11	78.09	20.90	57.19
C.P. 33-243	15.85	12.85	81.07	19.96	3.96	79.04	21.96	57.08
C.P. 34-115	15.11	12.19	80.68	19.67	3.83	75.34	21.64	53.70
C.P. 36-85	16.41	13.37	81.47	17.50	4.16	72.80	19.25	53.55
C.P. 36-17	15.50	12.43	80.19	18.33	3.83	70.20	20.16	50.04
C.P. 34-86	16.08	12.83	79.79	15.74	3.96	62.33	17.31	45.02
C.P. 36-62	16.79	14.18	84.46	13.27	4.47	59.32	14.60	44.72
C.P. 33-372	15.66	12.26	78.29	16.08	3.83	61.59	17.69	43.90
C.P. 29-320	16.05	12.80	79.75	13.84	3.94	54.53	15.22	39.31
Fall Plant Cane (Sharkey)								
C.P. 29-116	15.30	11.81	77.19	12.11	$3.83	$46.38	$13.32	$33.06
C.P. 33-224	14.37	10.87	75.64	13.79	3.35	46.20	15.17	31.03
C.P. 34-21	14.27	11.05	77.44	12.15	3.49	42.40	13.37	29.03
C.P. 34-120	14.72	11.52	78.26	10.60	3.83	40.60	11.66	28.94
C.P. 33-409	14.47	11.10	76.71	8.77	3.52	30.87	9.65	21.22
C.P. 34-1	14.43	10.99	76.16	7.73	3.44	26.59	8.50	18.09
C.P. 29-103	16.18	12.79	79.05	5.21	3.94	20.53	5.73	14.80
C.P. 33-372	14.75	11.13	75.46	4.90	3.55	17.40	5.39	12.01
First Stubble (Yazoo)								
C.P. 34-21	16.32	12.93	79.23	23.86	$3.99	$95.20	$26.25	$68.95
C.P. 29-120	15.92	12.60	79.14	24.39	3.87	94.39	26.83	67.56
C.P. 33-310	16.31	11.74	71.98	23.23	3.83	88.97	25.55	63.42
C.P. 34-120	15.53	11.98	77.14	21.81	3.83	83.53	23.99	59.54
C.P. 34-1	16.31	12.83	78.66	18.19	3.96	72.03	20.01	52.02
C.P. 33-243	15.28	12.17	79.65	18.58	3.83	71.16	20.44	50.72
C.P. 29-320	16.06	12.90	80.32	17.17	3.98	68.51	18.89	49.62
C.P. 28-19	15.63	12.13	77.61	16.69	3.83	63.92	18.36	45.56
C.P. 29-103	15.92	12.12	76.13	12.50	3.83	47.88	13.75	34.13
First Stubble (Sharkey)								
C.P. 28-11	16.02	12.39	77.34	12.28	$3.83	$47.03	$13.51	$33.52
C.P. 33-372	15.53	11.65	75.02	12.15	3.83	46.53	13.49	33.04
C.P. 31-529	14.62	10.91	74.62	12.33	3.38	41.80	13.56	28.24
C.P. 29-116	15.24	10.49	68.83	14.39	3.06	44.03	15.82	28.21
C.P. 29-120	16.56	13.53	81.70	14.14	4.22	59.67	15.55	44.12
C.P. 33-243	16.02	13.05	81.46	9.54	4.04	38.64	10.49	28.15
C.P. 29-103	17.58	13.47	76.62	5.47	4.20	22.97	6.02	16.95
Second Stubble (Yazoo)								
C.P. 29-120	15.71	12.77	81.29	17.89	$3.93	$70.31	$19.68	$50.63
C.P. 31-529	15.28	12.93	84.62	17.23	3.99	68.92	18.95	49.97
C.P. 29-103	16.29	12.59	77.29	15.96	3.86	61.61	17.56	44.05
C.P. 29-320	15.61	12.29	78.73	14.48	3.83	55.46	15.93	39.53
C.P. 33-243	15.28	12.30	80.50	15.54	3.83	59.52	17.09	42.43

NOTES

Fall Plant Cane (Yazoo): This variety test consisting of three standard field varieties and thirty-one unreleased varieties was planted on September 17-18, 1941, and harvested on November 18, 1942.

The four leading varieties are: C.P. 34-120, C.P. 28-19, C.P. 34-21, and C.P. 33-425. Several other varieties like C.P. 34-139, C.P. 34-1 and C.P. 34-53 made a good showing.

Fall Plant Cane (Sharkey): In the black land test there are two commercial canes and fourteen unreleased varieties. As in previous years, C.P. 29-116 made the best showing. In the introductory plots C.P. 36-75 and C.P. 36-105 were the most promising. C.P. 33-224, C.P. 34-21 and C.P. 34-120 indicate good possibilities as black land canes.

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First Stubble (Yazoo): This test consists of five commercial canes and sixteen unreleased varieties. The field was planted September 18, 1940, and harvested November 19, 1941 as plant cane and on October 20-21, 1942 as first stubble. C.P. 34-21 was the leading variety, followed by C.P. 29-120. C.P. 34-120 which was released in 1942 ranked fourth.

First Stubble (Sharkey): Five commercial canes and six unreleased varieties were planted September 18, 1940. The field was harvested as plant cane November 19, 1941, and as first stubble October 21, 1942. C.P. 28-11 made the best showing, and two unreleased canes, C.P. 33-372 and C.P. 31-529, ranked second and third respectively.

Second Stubble (Yazoo): This test consisted of five commercial canes and thirteen unreleased varieties, which were planted September 18, 1939. The field was harvested on the following dates: November 21, 1940, October 28, 1941, and October 20, 1942. In the introductory plots, three varieties, C.P. 34-1, C.P. 34-21, and C.P. 34-120, were outstanding. In the main test C.P. 31-529 ranked second to C.P. 29-120.

TABLE No. 2—Glenwood Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Yazoo)								
C.P. 36-62	18.15	15.65	86.23	25.60	$5.04	$129.28	$28.16	$101.12
C.P. 34-86	17.63	14.19	80.49	27.63	4.48	123.78	30.39	93.39
C.P. 36-85	17.17	14.06	81.89	27.65	4.43	122.49	30.42	92.07
C.P. 28-19	17.82	15.03	84.34	22.25	4.80	106.80	24.48	82.32
F 31-962	18.14	15.18	83.68	21.52	4.86	104.80	23.67	81.13
C.P. 34-115	16.49	12.58	76.29	29.23	3.86	112.83	32.15	80.68
C.P. 34-120	16.30	12.36	75.83	29.13	3.83	111.57	32.04	79.53
C.P. 33-243	14.83	12.19	82.20	28.96	3.83	110.92	31.86	79.06
C.P. 34-92	16.47	12.47	75.71	28.70	3.83	109.92	31.57	78.35
C.P. 34-75	15.61	12.29	78.73	28.35	3.83	108.86	31.19	77.67
C.P. 36-55	16.94	13.79	81.40	23.45	4.32	101.54	25.80	75.74
C.P. 34-143	16.29	13.11	80.47	25.74	4.06	103.41	28.02	75.39
C.P. 34-139	15.41	11.20	72.68	30.00	3.60	108.00	33.30	74.70
C.P. 33-425	16.72	13.92	83.25	22.64	4.37	99.16	24.90	74.26
C.P. 33-372	16.65	13.50	81.08	23.56	4.21	99.19	25.92	73.27
C.P. 33-409	16.46	13.79	83.78	21.78	4.32	94.09	23.96	70.13
C.P. 34-21	15.82	12.88	81.42	25.80	3.98	98.04	28.38	69.66
C.P. 36-19	16.85	13.62	80.83	21.09	4.26	89.84	23.20	66.64
C.P. 35-14	16.82	14.09	83.77	19.66	4.44	87.29	21.63	65.66
C.P. 36-70	17.11	12.22	71.42	24.39	3.83	93.41	26.83	66.58
C.P. 31-551	16.56	12.85	77.60	22.17	3.96	88.01	24.39	63.62
C.P. 33-485	16.46	12.90	78.37	20.81	3.98	82.82	22.89	59.93
C.P. 34-1	16.95	13.84	81.65	17.85	4.34	77.65	19.64	58.01
C.P. 36-75	15.78	12.29	77.88	21.17	3.83	81.08	23.29	57.79
C.P. 36-17	16.46	12.40	75.33	20.52	3.83	78.59	22.57	56.01
C.P. 33-409*	17.40	14.48	83.22	15.18	4.59	69.68	16.70	52.98
*(Sharkey).								
First Stubble (Yazoo)								
C.P. 34-120	15.33	11.73	76.52	30.15	$3.83	$115.47	$31.17	$84.30
C.P. 33-310	16.58	12.21	73.64	25.54	3.83	97.82	28.09	69.73
C.P. 29-120	16.09	12.97	80.61	23.24	4.01	93.19	25.56	67.63
C.P. 34-21	16.53	12.83	77.62	22.37	3.96	88.59	24.61	63.98
C.P. 29-103	17.11	12.94	75.63	20.64	4.00	82.56	22.70	59.86
C.P. 33-372	16.13	12.52	77.62	21.35	3.84	81.98	23.49	58.49
C.P. 29-320	15.81	12.44	78.68	21.10	3.83	81.02	23.21	57.81
C.P. 34-1	15.84	10.44	65.91	26.72	3.02	80.69	29.39	51.30
C.P. 33-425	16.71	13.37	80.01	15.91	4.16	66.34	17.50	48.84
C.P. 34-79	15.98	12.57	78.66	17.50	3.86	67.55	19.25	48.30
C.P. 28-19	16.23	13.09	80.65	15.59	4.06	63.30	17.15	46.15
C.P. 33-243	14.87	11.51	77.40	16.59	3.83	63.54	18.25	45.29
C.P. 34-139				18.50				
Second Stubble (Yazoo)								
C.P. 33-243	14.44	11.40	78.95	19.50	$3.75	$73.13	$21.45	$51.68
C.P. 29-120	15.09	11.94	79.13	17.87	3.83	68.44	19.66	48.78
C.P. 33-409	14.32	10.75	75.07	20.56	3.26	67.03	22.62	44.41
C.P. 31-529	15.55	11.74	75.50	15.91	3.83	60.94	17.50	43.44
C.P. 33-372	14.68	10.71	72.96	18.80	3.22	60.54	20.68	39.86
C.P. 28-19	15.00	11.73	78.20	13.70	3.83	52.47	15.07	37.40
C.P. 29-320	15.09	10.75	71.24	14.35	3.26	46.78	15.79	30.99
C.P. 29-103	15.90	11.67	73.40	11.17	3.83	42.78	12.29	30.49
Second Stubble (Sharkey)								
C.P. 28-11	14.77	11.06	74.88	19.24	$3.49	$67.15	$21.16	$45.99
C.P. 31-529	16.30	12.34	75.71	16.07	3.83	61.55	17.68	43.87
C.P. 29-120	16.26	13.35	82.10	14.00	4.16	58.24	15.40	42.84
C.P. 33-243	15.05	11.90	79.07	8.20	3.83	31.41	9.02	22.39
C.P. 29-103				5.10				

NOTES

Fall Plant Cane (Yazoo): There was a total of thirty varieties in this test, which were planted September 19, 1941, and harvested November 19, 1942. Three unreleased varieties surpassed C.P. 28-19, and five other varieties compared very favorably with it. F 31-962 was slightly higher in sucrose and only $1.19 lower in per acre money value.

First Stubble (Yazoo): This field was planted October 2, 1940, and harvested November 20, 1941 and October 29, 1942. There was a total of twenty-two varieties. The highest five varieties ranked as follows: C.P. 34-120, C.P. 33-310, C.P. 29-120, C.P. 34-21, and C.P. 29-103. C.P. 28-19 and C.P. 29-320 were both comparatively low ranking varieties.

Second Stubble (Yazoo): The twenty varieties in this test were planted September 21, 1939 and harvested November 24, 1940, October 30, 1941, and October 29, 1942. The five leading varietles which surpassed C.P. 28-19 and C.P. 29-320 ranked in the following order: C.P. 33-243, C.P. 29-120, C.P. 33-409, C.P. 31-529, and C.P. 33-372. In the black land comparisons C.P. 28-11 was first, C.P. 31-529 second, and C.P. 29-120 third.

TABLE No. 3—Reserve Test Fields

Variety	Normal Juice			Acidity	Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity			Ton	Acre		
Fall Plant Cane (Yazoo)									
C.P. 33-243	16.11	11.57	71.82	2.4	35.35	$3.83	$135.39	$38.89	$96.50
C.P. 36-85	16.11	11.57	71.82	2.4	34.92	3.83	133.74	38.41	95.33
C.P. 34-21	15.88	11.58	72.92	2.8	34.06	3.83	130.45	37.47	92.98
C.P. 28-19	15.30	11.18	73.09	1.8	33.79	3.58	120.97	37.17	83.80
C.P. 36-70	15.93	12.36	77.59	2.2	29.70	3.83	113.75	32.67	81.08
C.P. 34-92	15.74	11.11	70.58	2.8	32.49	3.53	114.69	35.74	78.95
C.P. 36-55	16.37	12.04	73.55	3.1	28.40	3.83	108.77	31.24	77.53
C.P. 33-372	16.27	11.92	73.26	1.8	27.79	3.83	106.44	30.57	75.87
C.P. 36-62	15.42	11.30	73.28	2.7	28.50	3.68	104.88	31.35	73.53
C.P. 34-75	15.33	11.15	72.73	2.3	28.18	3.56	100.32	31.00	69.32
C.P. 33-409	14.89	10.59	71.12	3.0	29.19	3.13	91.36	32.11	59.25
C.P. 34-143	14.86	10.37	69.78	1.9	31.85	2.96	94.28	34.04	59.24
C.P. 34-115	14.25	9.83	68.98	2.9	38.86	2.55	99.09	42.75	56.34
F 31-962	16.96	13.14	77.48	2.0	17.80	4.08	72.62	19.58	53.04
C.P. 36-17	15.30	10.51	68.69	2.7	26.75	3.07	82.12	29.43	52.69
C.P. 34-120	14.76	10.28	69.65	3.0	27.87	2.90	80.82	30.66	50.16
C.P. 35-14	15.15	10.76	71.02	2.5	22.69	3.26	73.97	24.96	49.01
C.P. 36-19	14.27	9.64	67.55	3.4	32.18	2.41	77.55	35.40	42.15
C.P. 36-75	14.47	9.69	66.97	3.0	31.12	2.44	75.93	34.23	41.70
C.P. 34-53	14.55	9.83	67.56	3.4	27.96	2.55	71.30	30.76	40.54
C.P. 36-191	14.06	9.46	67.28	2.2	27.60	2.29	63.20	30.36	32.84
C.P. 34-77	14.37	9.76	67.92	4.0	24.75	2.50	61.88	27.23	34.65
C.P. 31-551	14.45	9.51	65.81	2.8	27.10	2.31	62.60	29.81	32.79
C.P. 34-139	14.23	8.87	62.33	2.8	33.69	1.97	66.37	37.06	29.31
C.P. 33-425	13.47	9.07	67.33	2.7	27.25	2.12	57.77	29.98	27.79
C.P. 31-509	14.62	9.31	63.68	2.1	24.67	2.19	54.03	27.14	26.89
C.P. 34-86	13.74	8.84	64.34	3.0	28.00	1.94	54.32	30.80	23.52
First Stubble (Yazoo)									
C.P. 34-1	15.71	11.30	71.93	1.9	39.69	$3.68	$146.06	$43.66	$102.40
C.P. 34-120	15.74	11.35	72.11	2.2	34.84	3.72	129.60	38.32	91.28
C.P. 29-120	16.22	11.90	73.37	1.5	33.08	3.83	126.70	36.39	90.31
C.P. 28-19	15.91	11.63	73.10	1.9	29.15	3.83	111.64	32.07	79.57
C.P. 33-372	15.76	11.47	72.78	1.8	27.85	3.81	106.11	30.64	75.47
C.P. 34-21	16.29	11.77	72.25	1.9	27.33	3.83	104.67	30.06	74.61
C.P. 34-79	16.42	11.68	71.13	1.7	24.68	3.83	94.52	27.15	67.37
C.P. 33-243	15.05	10.83	71.96	1.2	29.80	3.32	98.94	32.78	66.16
C.P. 29-103	14.96	9.69	64.77	1.4	30.47	2.44	74.35	33.52	40.83
C.P. 29-320	14.78	9.67	65.43	2.0	21.36	2.43	51.90	23.50	28.40
Second Stubble (Yazoo)									
C.P. 33-372	15.57	13.24	85.04		28.87	$4.11	$118.66	$31.76	$86.90
C.P. 34-21	15.91	11.87	74.61		29.35	3.83	112.41	32.29	80.12
C.P. 34-120	15.11	10.54	69.76		40.21	3.09	124.25	44.31	86.90
C.P. 33-409	15.08	12.32	81.70		22.13	3.83	84.76	24.34	60.42
C.P. 31-529	16.34	12.28	75.15		21.43	3.83	82.08	23.57	58.51
C.P. 29-120	15.91	11.87	74.61		20.51	3.83	78.55	22.56	55.99
C.P. 28-19	16.74	12.75	76.16		19.15	3.93	75.20	21.07	54.19
C.P. 33-425	16.32	12.34	75.61		18.06	3.83	69.17	19.87	49.30
C.P. 29-320	16.18	11.61	71.76		14.15	3.83	54.19	15.57	38.62
C.P. 34-79	16.29	11.09	68.08		14.57	3.52	51.29	16.03	35.26
C.P. 33-243	16.59	12.16	73.30		12.53	3.83	47.99	13.78	34.21
C.P. 29-103					6.89			7.58	

NOTES

Fall Plant Cane (Yazoo): There was a total of thirty-one varieties in this test, planted October 1, 1941, and harvested November 20, 1942. The sucrose tests of all varieties were lower than the other two alluvial fields, while the tonnages were considerably higher. Fifteen varieties were below 11.5% sucrose and five varieties were under 9.5% sucrose. The leading varieties ranked in the following order: C.P. 33-243, C.P. 36-85, C.P. 34-21, C.P. 28-19, and C.P. 36-70.

First Stubble (Yazoo): In this test there was nineteen varieties, which were planted September 19, 1940 and harvested November 27, 1941 and October 30, 1942. The sucrose tests were lower and tonnages higher than at Cinclare and Glenwood. The varieties making the best showing ranked as follows: C.P. 34-1, C.P. 34-120, C.P. 29-120, and C.P. 28-19. Three commercial canes, C.P. 29-320, C.P. 29-103, and C.P. 33-243, were low ranking varieties.

Secoond Stubble (Yazoo): There were nineteen varieties in this test, which was planted September 20, 1939 and harvested November 26, 1940, November 2, 1941, and October 30, 1942. The four highest ranking varieties were: C.P. 33-372, C.P. 34-21, C.P. 34-120, and C.P. 33-409. From a field yield standpoint C.P. 33-243 and C.P. 29-103 made the poorest showing.

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TABLE No. 4—Meeker Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Yahola)								
C.P. 36-62	17.78	14.84	83.46	41.20	$4.73	$194.88	$45.32	$149.56
C.P. 34-92	16.57	11.42	68.92	45.22	3.77	170.48	49.74	120.74
C.P. 34-79	17.36	14.38	82.83	33.91	4.55	154.29	37.30	116.99
C.P. 36-70	16.39	12.10	73.83	42.07	3.83	161.13	46.28	114.85
C.P. 33-310	17.74	14.44	81.40	32.87	4.57	150.22	36.16	114.06
C.P. 36-85	16.28	11.42	70.15	41.55	3.77	156.64	45.71	110.93
C.P. 36-17	16.67	12.55	75.28	39.63	3.85	152.58	43.59	108.99
C.P. 34-21	15.21	11.31	74.36	41.28	3.68	151.91	45.41	106.50
C.P. 34-120	16.38	12.76	77.90	36.95	3.93	145.58	40.65	104.93
C.P. 36-55	16.23	12.57	77.45	37.02	3.86	142.90	40.72	102.18
C.P. 33-243	15.60	12.43	79.68	36.33	3.83	139.14	39.96	99.18
C.P. 34-53	16.77	12.49	74.48	35.97	3.83	137.77	39.57	98.20
C.P. 33-425	18.04	14.44	80.04	27.65	4.57	126.36	30.42	95.94
F 31-962	17.13	15.46	90.25	24.74	4.96	122.71	27.21	95.50
C.P. 36-75	15.92	11.70	73.49	33.04	3.83	126.54	36.34	90.20
C.P. 33-372	17.84	13.10	73.43	30.35	4.06	123.22	33.39	89.83
C.P. 29-320	17.36	12.35	71.14	32.80	3.83	125.62	36.08	89.54
C.P. 33-253	16.18	11.58	71.57	32.76	3.83	125.47	36.04	89.43
C.P. 36-19	15.18	11.27	74.24	33.95	3.65	123.92	37.35	86.57
C.P. 33-409	16.67	12.75	76.48	30.07	3.93	118.18	33.08	85.10
C.P. 34-86	15.41	10.52	68.27	41.02	3.08	126.34	45.12	81.22
C.P. 34-139	15.50	10.10	65.16	43.00	2.76	120.78	48.14	79.64
C.P. 34-75	15.21	10.73	70.55	36.92	3.24	119.62	40.61	79.01
C.P. 31-551	14.26	9.91	69.50	35.66	2.61	93.07	39.23	53.84
C.P. 34-54	15.02	10.04	66.84	33.11	2.71	89.73	36.42	53.31
C.P. 33-485	------	no test	------	27.60	------	no test	no test	------
First Stubble (Yahola)								
C.P. 34-21	15.79	12.35	78.21	36.08	$3.83	$138.19	$39.69	$98.50
C.P. 33-243	15.70	12.44	79.24	33.72	3.83	129.15	37.09	92.06
C.P. 33-409	16.57	12.64	76.28	30.88	3.88	119.81	33.97	85.84
C.P. 33-310	16.47	12.40	75.29	31.13	3.83	119.23	34.24	84.99
C.P. 34-79	16.79	13.36	78.77	26.86	4.16	111.74	29.55	82.19
C.P. 33-425	16.57	13.15	79.36	27.38	4.08	111.71	30.12	81.59
C.P. 28-19	17.75	14.02	78.99	24.11	4.41	106.33	26.52	79.81
C.P. 29-320	16.18	12.88	79.60	26.00	3.98	103.48	28.60	74.88
C.P. 34-120	15.21	10.61	69.76	34.40	3.15	108.36	37.84	70.52
Second Stubble (Yahola)								
C.P. 33-372	16.18	11.99	74.10	30.74	$3.83	$117.73	$33.81	$83.92
C.P. 33-243	15.40	11.17	72.53	32.44	3.58	116.14	35.68	80.46
C.P. 31-529	16.57	13.10	79.06	25.65	4.06	104.14	28.22	75.92
C.P. 34-79	15.99	12.08	75.55	24.17	3.83	92.57	26.59	65.98
C.P. 29-120	15.40	10.86	70.52	26.60	3.34	88.84	29.26	59.58
Co. 270	15.79	11.66	73.84	20.90	3.83	80.05	22.99	57.06
C.P. 29-103	16.28	10.35	63.57	27.50	2.95	81.13	30.25	50.88
C.P. 29-320	16.57	12.49	75.38	17.29	3.83	66.22	19.02	47.20
C.P. 28-19	16.96	13.08	77.12	13.50	4.05	54.68	14.85	39.83
Third Stubble (Yahola)								
C.P. 33-243	15.40	10.95	71.10	21.25	$3.41	$72.46	$23.38	$49.03
C.P. 31-529	15.40	12.47	80.97	17.50	3.83	67.03	19.25	47.78
C.P. 29-320	16.38	12.22	74.60	10.83	3.83	41.48	11.91	29.57

NOTES

Fall Plant Cane (Yahola): This test consisting of thirty-two varieties was planted October 14, 1941 and harvested December 2, 1942. Nine varieties were under standard 11.5% sucrose, and one variety (C.P. 34-115) was salvage cane.

The standard commercial cane ranked 17th. The five highest ranking were in the following order: C.P. 36-62, C.P. 34-92, C.P. 34-79, C.P. 36-70, and C.P. 33-310.

First Stubble (Yahola): There were nineteen varieties in this test which was planted October 10, 1940 and harvested November 15, 1941, and November 3, 1942. In the ten mill tests that were made, one variety was below par and one variety salvage cane. C.P. 28-19 and C.P. 29-320 ranked seventh and eighth respectively. The four leading varieties ranked as follows: C.P. 34-21, C.P. 33-243, C.P. 33-409, and C.P. 33-310.

Second Stubble (Yahola): The sixteen varieties in this test were planted October 4, 1939 and harvested November 19, 1940, October 24, 1941, and November 3, 1942. C.P. 33-372, C.P. 33-243, C.P. 31-529, and C.P. 34-79 made the best showing. C.P. 29-320 and C.P. 28-19 were the two lowest ranking varieties.

NOTICE OF HEARINGS

Information from Washington is to the effect that tenative dates have been set by the Sugar Branch for hearings in Louisiana on the 1943 Fair Price Determination (Cane Purchase Contract) and fair and reasonable wage rates for the harvesting of the crop.

The tenative dates set for the hearings are June 22nd, in the Court House in Baton Rouge, La., and June 24th, in the New Court House in New Iberia, La.

Both hearings are scheduled to begin at 10:00 A.M.

TABLE No. 5—Shirley Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Yahola)								
C.P. 36-62	18.09	15.24	84.25	37.66	$4.88	$183.78	$41.43	$142.35
C.P. 34-120	16.92	13.02	76.95	45.37	4.03	182.84	49.91	132.93
C.P. 36-85	16.63	12.64	76.01	30.00	3.88	164.00	33.00	131.00
C.P. 33-243	16.72	13.64	81.58	41.29	4.27	176.31	45.42	130.89
C.P. 33-310	17.60	13.35	75.85	42.20	4.16	175.55	46.42	129.13
C.P. 34-139	16.43	11.84	72.06	47.19	3.83	180.74	51.91	128.83
C.P. 34-79	17.60	14.58	82.84	36.30	4.63	168.07	39.93	128.14
C.P. 28-19	17.31	13.90	80.30	37.20	4.37	162.56	40.92	121.64
C.P. 36-17	17.12	13.61	79.50	37.66	4.26	160.43	41.43	119.00
C.P. 29-320	16.63	12.77	76.79	41.74	3.93	164.04	45.91	118.13
C.P. 36-55	16.23	12.57	77.45	41.52	3.86	160.27	45.67	114.60
C.P. 33-425	18.09	15.09	83.42	29.50	4.82	142.19	32.45	109.74
C.P. 34-53	16.92	13.28	78.49	34.48	4.13	142.40	37.93	104.47
C.P. 34-21	15.35	11.28	73.49	40.38	3.66	147.79	44.42	103.37
C.P. 36-75	16.53	12.55	75.92	37.20	3.85	143.22	40.92	102.30
C.P. 33-253	16.33	12.42	76.10	37.20	3.83	142.48	40.92	101.56
C.P. 34-75	15.45	11.35	73.46	36.30	3.72	135.04	39.93	95.11
C.P. 33-409	17.21	14.13	82.10	25.00	4.45	111.25	27.50	83.75
First Stubble (Yahola)								
C.P. 33-425	18.03	14.77	81.92	27.68	$4.70	$130.10	$30.45	$99.65
C.P. 33-243	15.97	12.55	78.58	34.00	3.85	130.90	37.40	93.50
C.P. 29-320	16.46	13.06	79.34	31.76	4.04	128.31	34.94	93.37
C.P. 29-120	16.66	12.81	76.89	30.86	3.95	121.90	33.95	87.95
C.P. 28-19	17.74	14.43	81.34	24.50	4.57	111.97	26.95	85.02
C.P. 34-120	16.27	12.60	77.44	29.95	3.87	115.91	32.95	82.96
C.P. 34-79	17.15	13.78	80.35	25.41	4.32	109.77	27.95	81.82
C.P. 29-103	18.23	14.21	77.95	24.05	4.48	107.74	26.46	81.28
C.P. 33-310	15.88	11.32	71.28	30.40	3.69	112.18	33.44	78.74
C.P. 33-372	16.07	11.80	73.40	25.86	3.83	99.04	28.45	70.59
Second Stubble (Yahola)								
C.P. 31-529	16.27	11.67	71.73	23.59	$3.83	$90.35	$25.95	$64.40
C.P. 29-320	16.17	12.71	78.60	17.70	3.91	69.21	19.47	49.74
C.P. 29-120	17.44	13.70	78.56	15.00	4.29	64.35	16.50	47.85
C.P. 34-79	17.25	13.94	80.81	13.61	4.38	59.61	14.97	44.64
C.P. 29-103	18.33	13.47	73.49	13.61	4.20	57.16	14.97	42.19
C.P. 33-243	16.17	12.84	79.41	12.25	3.96	48.51	13.48	35.03
C.P. 28-19	18.62	15.85	85.12	5.90	5.11	30.15	6.49	23.66

NOTES

Fall Plant Cane (Yahola): Thirty-three varieties were planted September 29, 1941 and harvested November 23, 1942. In the eighteen mill tests made at Augusta Factory two varieties, C.P. 34-21 and C.P. 34-75, were below par cane. The two standard canes, C.P. 28-19 and C.P. 29-320, ranked 8th and 10th respectively. The four leading varieties ranked as follows: C.P. 36-62, C.P. 34-120, C.P. 36-85, and C.P. 33-243.

First Stubble (Yahola): There were twenty-two varieties in this test, which were planted September 27, 1940 and harvested December 3, 1941 and November 5, 1942. The five leading varieties ranked in the following order: C.P. 33-425, C.P. 33-243, C.P. 29-320, C.P. 29-120 and C.P. 28-19.

Second Stubble (Yahola): There were nineteen varieties in this test, planted September 25, 1939 and harvested November 14, 1940, November 5, 1941, and November 5, 1942. The four varieties making best showing ranked as follows: C.P. 31-529, C.P. 29-320, C.P. 29-120, and C.P. 34-79.

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TABLE No. 6—Sterling Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Franklin Series)								
C.P. 31-509	17.70	14.85	83.90	31.08	$4.73	$147.01	$34.19	$112.82
C.P. 34-92	17.51	13.95	79.67	30.27	4.39	132.89	33.30	99.59
C.P. 33-243	17.26	14.66	84.94	27.81	4.66	129.87	30.59	99.28
C.P. 34-143	18.26	15.27	83.63	26.16	4.89	127.92	28.78	99.14
C.P. 36-19	18.11	14.94	82.50	26.82	4.76	127.66	29.50	98.16
C.P. 33-372	17.04	14.32	84.04	27.93	4.53	126.52	30.72	95.80
C.P. 36-55	17.39	14.60	83.96	27.00	4.63	125.01	29.70	95.31
C.P. 36-70	17.45	14.78	84.70	26.22	4.70	123.23	28.84	94.39
C.P. 36-75	17.59	14.41	81.92	25.72	4.56	117.28	28.29	88.99
C.P. 34-21	16.98	14.03	82.63	26.78	4.42	118.37	29.46	88.91
C.P. 29-116	16.25	13.16	80.98	29.26	4.08	119.38	32.19	87.19
C.P. 34-120	17.38	14.67	84.41	24.43	4.66	113.84	26.87	86.97
Co. 290	16.54	13.48	81.50	27.27	4.21	114.81	30.00	84.81
C.P. 35-14	17.87	15.44	86.40	21.79	4.95	107.86	23.97	83.89
F 31-962	18.25	15.40	84.38	21.05	4.94	103.99	23.16	80.83
C.P. 36-17	17.89	14.71	82.22	22.00	4.68	102.96	24.20	78.76
C.P. 34-75	16.59	13.57	81.80	25.00	4.24	106.00	27.50	78.50
C.P. 29-103	18.27	15.25	83.47	20.74	4.88	101.21	22.81	78.40
C.P. 33-485	18.99	15.60	82.15	20.00	5.02	100.40	22.00	78.40
C.P. 34-139	17.24	13.95	79.67	23.17	4.39	101.72	25.49	76.23
C.P. 33-425	17.45	14.76	84.58	20.00	4.70	94.00	22.00	72.00
C.P. 31-551	16.14	13.17	81.60	24.07	4.09	98.45	26.48	71.97
C.P. 36-62	17.29	14.19	82.07	19.24	4.48	86.20	21.16	65.04
C.P. 33-409	16.48	13.18	79.98	20.11	4.09	82.25	22.12	60.13
C.P. 36-85	18.51	14.63	79.04	11.42	4.65	53.10	12.56	40.54
First Stubble (Franklin Series)								
C.P. 29-120	18.15	14.19	78.18	20.91	$4.48	$93.68	$23.00	$70.68
C.P. 34-21	17.16	14.43	84.09	18.96	4.57	86.65	20.86	65.79
C.P. 34-120	16.80	13.69	81.49	20.35	4.29	87.30	22.39	64.91
C.P. 33-372	17.55	14.32	81.60	18.18	4.53	82.36	20.00	62.36
C.P. 33-425	17.82	14.10	79.12	17.96	4.44	79.74	19.76	59.98
Co. 290	16.06	12.83	79.89	20.64	3.96	81.73	22.70	59.03
C.P. 33-310	16.55	13.25	80.06	19.50	4.12	80.34	21.45	58.89
C.P. 29-116	17.00	13.58	79.88	17.15	4.24	72.72	18.87	53.85
C.P. 34-139	16.48	12.97	78.70	16.95	4.01	67.97	18.65	49.32
C.P. 29-103	17.42	13.92	79.91	11.52	4.37	50.34	12.67	37.67
C.P. 33-243	16.58	13.71	82.69	9.92	4.29	42.56	10.91	31.65
C.P. 34-79	16.74	13.72	81.96	9.60	4.30	41.28	10.56	30.72
C.P. 29-320	16.55	13.78	83.26	9.40	4.32	40.61	10.34	30.27
Second Stubble (Franklin Series)								
Co. 290	15.86	12.85	81.02	17.13	$3.96	$67.83	$18.84	$48.99
C.P. 29-120	17.63	14.46	82.02	13.66	4.58	62.56	15.03	47.53
C.P. 29-116	16.90	13.42	79.41	14.58	4.18	60.94	16.04	44.90
C.P. 28-19	17.26	14.20	82.27	12.96	4.48	58.06	14.26	43.80
C.P. 31-529	17.55	13.94	79.43	12.04	4.38	52.74	13.24	39.50
Co. 270	15.60	12.44	79.74	10.19	3.83	39.03	11.21	27.82
C.P. 29-103	17.58	13.78	78.38	7.40	4.32	31.97	8.14	23.83
C.P. 29-320	16.67	13.67	82.00	6.94	4.28	29.70	7.63	22.07
C.P. 33-243	16.41	13.68	83.36	6.25	4.28	26.75	6.88	19.87

NOTES

Fall Plant Cane (Franklin Series): The thirty varieties in this test were planted September 22-27, 1941 and harvested December 8, 1943. A total of twenty-five mill tests of these varieties was made at Sterling Factory. C.P. 29-116 and Co. 290 ranked 11th and 13th respectively. The four highest ranking varieties were C.P. 31-509, C.P. 34-92, C.P. 33-243, and C.P. 34-143.

The following varieties are considered particularly promising, pending on their ability to stubble satisfactorily: C.P. 34-143, C.P. 36-55, C.P. 36-70, and C.P. 36-75.

First Stubble (Franklin Series): There are twenty-three varieties in this test which was planted October 3, 1940 and harvested November 10, 1941 and November 10, 1942. Co. 290 and C.P. 29-116 ranked 6th and 8th respectively. The four varieties making the best showing ranked as follows: C.P. 29-120, C.P. 34-21, C.P. 34-120, and C.P. 33-372.

Second Stubble (Franklin Series): The twenty varieties in this test were planted September 25, 1939 and harvested November 14, 1940, November 10, 1941 and November 10, 1942. In the nine mill tests conducted at Sterling Factory, the five leading varieties were in following order: Co. 290, C.P. 29-120, C.P. 29-116, C.P. 28-19, and C.P. 31-529. C.P. 29-320 and C.P. 33-243 made the poorest showing

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TABLE No. 7—Billeaud Test Fields

Variety	Normal Juice			Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity		Ton	Acre		
Fall Plant Cane (Lintonia)								
C.P. 33-243	17.60	15.23	86.53	31.26	$4.88	$152.55	$34.39	$118.16
C.P. 33-10	19.80	16.76	84.65	26.89	5.46	146.82	29.58	117.24
C.P. 31-509	17.60	14.82	84.20	30.94	4.72	146.04	34.03	112.01
C.P. 34-120	17.60	15.05	85.51	28.93	4.81	139.15	31.82	107.32
C.P. 34-92	18.20	14.77	81.15	29.05	4.70	136.54	31.96	104.58
C.P. 34-21	15.60	13.82	83.25	31.91	4.34	138.49	35.10	103.39
C.P. 29-116	16.80	13.07	77.80	33.74	4.05	136.65	37.11	99.54
Co. 290	16.60	12.95	78.01	33.95	4.00	135.80	37.35	98.45
C.P. 33-425	19.30	16.87	87.41	22.11	5.50	121.61	24.32	97.29
C.P. 33-409	18.80	16.50	87.77	21.75	5.36	116.58	23.93	92.65
C.P. 33-224	17.40	14.05	80.75	26.85	4.42	118.68	29.54	89.14
C.P. 33-372	18.20	15.29	84.01	21.18	4.90	103.78	23.30	80.48
C.P. 34-1	16.50	12.95	78.48	27.67	4.00	110.68	30.44	80.24
C.P. 36-55	18.20	15.50	85.16	20.00	4.98	99.60	22.00	77.60
C.P. 31-551	17.06	13.97	81.89	22.45	4.39	98.56	24.70	73.85
C.P. 34-139	17.40	13.55	77.87	22.93	4.23	96.99	25.22	71.77
C.P. 36-62	19.01	16.33	85.90	16.28	5.30	86.28	17.91	68.37
C.P. 36-17	17.30	13.27	76.71	23.70	4.12	76.44	26.07	50.37
First Stubble (Lintonia)								
C.P. 33-310	18.80	15.44	82.13	27.32	$4.96	$135.51	$30.05	$105.46
Co. 290	15.50	12.00	77.42	27.92	3.83	106.93	30.71	76.22
C.P. 34-1	15.50	12.07	77.87	27.41	3.83	104.98	30.15	74.83
C.P. 29-116	15.90	11.86	74.59	26.05	3.83	99.77	28.66	71.11
C.P. 29-120	17.00	14.13	83.12	20.09	4.45	89.40	22.10	67.30
C.P. 33-425	18.60	16.27	87.47	16.12	5.27	84.95	17.73	67.22
C.P. 34-79	17.30	14.86	85.90	18.00	4.73	85.14	19.80	65.34
C.P. 33-243	15.90	13.02	81.89	21.50	4.03	86.65	23.65	63.00
C.P. 34-21	17.10	14.11	82.51	17.65	4.45	78.54	19.42	59.12
C.P. 33-224	16.00	12.58	78.63	20.80	3.86	80.29	22.88	57.41
C.P. 33-372	16.50	13.34	80.85	15.82	4.15	65.65	17.40	48.25
C.P. 29-320	16.10	13.12	81.49	15.47	4.07	62.96	17.02	45.94
C.P. 34-120	16.30	13.03	79.94	15.32	4.03	61.74	16.85	44.89
C.P. 34-77	15.50	12.60	81.29	14.53	3.87	56.23	15.98	40.25

NOTES

Fall Plant Cane (Lintonia): The thirty-seven varieties in this test were planted October 7, 1941 and harvested November 28, 1942. The standard varieties, C.P. 29-116 and Co. 290 ranked seventh and eighth respectively. The four highest ranking varieties are C.P. 33-243, C.P. 33-310, C.P. 31-509, and C.P. 34-120. C.P. 34-92 and C.P. 34-21 also made a very favorable showing.

First Stubble (Lintonia): There were twenty-three varieties in this test, which were planted September 25, 1940 and harvested November 25, 1941. The five highest ranking varieties are in the following order: C.P. 33-310, Co. 290, C.P. 34-1, C.P. 29-116, and C.P. 29-120.

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TABLE A. Rainfall at the Test Fields—Season of 1942.

Location	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total	
	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.	days	Ins.
Cinclare	5	10.57	9	6.47	10	5.74	9	11.47	8	1.90	19	11.04	11	4.95	15	6.91	7	8.37	8	4.25	3	0.50	9	5.22	113	77.39
Napoleonville	4	1.32	7	7.60	5	4.98	5	2.48	6	3.25	17	12.67	12	7.25	13	6.94	6	10.02	6	5.81	2	0.47	5	4.39	84	67.18
Reserve	10	1.39	12	8.66	13	5.69	7	0.93	9	4.49	16	6.94	17	9.77	13	6.44	10	4.91	7	8.59	5	0.71	9	6.63	128	65.15
Franklin	6	0.76	9	7.11	11	3.70	8	5.81	10	6.14	18	13.20	18	8.22	17	6.18	18	16.73	6	4.88	3	0.49	7	3.36	121	76.58
Cheneyville	7	4.28	6	3.82	10	7.65	9	4.77	8	1.10	10	5.55	8	3.25	12	6.87	9	3.54	5	3.16	2	1.45	8	6.07	94	51.51
Meeker	5	3.86	8	4.27	9	7.15	8	5.86	6	2.01	10	10.11	6	2.14	11	5.51	6	2.03	4	2.04	2	2.18	8	6.00	83	53.26
Broussard	2	0.71	7	6.01	9	3.79	7	12.61	4	4.09	11	13.68	10	7.48	7	6.05	3	9.05	6	3.19	2	0.22	7	3.15	75	70.03
Youngsville	2	1.52	5	5.78	7	3.91	7	13.69	5	3.24	14	12.81	6	5.31	9	3.64	3	7.16	5	4.65	0	0.00	1	1.90	64	63.61

NOTES

The rainfall data of Cinclare, Reserve, Franklin, and Cheneyville were taken from the "Climatological Data" of the U. S. Department of Commerce, Weather Bureau, New Orleans, Louisiana. The data for Napoleonville, Meeker, Broussard and Youngsville were taken from records of test field cooperators.

TABLE No. 8—Youngsville Test Fields

Variety	Normal Juice			Acidity	Tons Per Acre	Value		Less $1.10 Harvest	Balance
	Brix	Sucrose	Purity			Ton	Acre		
Fall Plant Cane (Olivier)									
Co. 290	16.25	12.82	78.89	2.9	37.92	$3.95	$149.78	$41.71	$108.07
C.P. 34-21	17.39	14.24	81.89	2.5	29.85	4.50	134.33	32.84	101.49
C.P. 36-55	17.67	14.67	83.02	1.4	28.36	4.66	132.16	31.20	100.96
C.P. 36-62	19.76	17.20	87.04	1.9	21.46	5.63	120.82	23.61	97.21
C.P. 34-120	16.91	13.73	81.19	2.2	30.15	4.30	129.65	33.17	96.48
C.P. 29-116	16.25	12.33	75.88	3.1	34.75	3.83	133.09	38.23	94.86
C.P. 36-70	17.58	14.55	82.76	1.1	26.77	4.62	123.68	29.45	94.23
C.P. 33-224	16.44	13.17	80.11	1.8	31.44	4.09	128.59	34.58	94.01
C.P. 33-310	17.96	14.58	81.18	2.0	26.58	4.63	123.07	29.24	93.83
C.P. 31-551	16.72	13.44	80.38	3.2	29.33	4.19	122.89	32.26	90.63
C.P. 34-86	18.62	15.51	83.30	2.2	23.14	4.98	115.24	25.45	89.79
C.P. 34-139	17.20	13.32	77.44	2.6	29.50	4.14	122.13	32.45	89.68
C.P. 34-143	18.43	15.49	84.05	2.2	22.75	4.98	113.30	25.03	88.27
C.P. 34-92	17.86	14.67	82.14	2.1	24.13	4.66	112.45	26.54	85.91
C.P. 33-425	17.96	15.22	84.74	3.0	21.49	4.87	104.66	23.64	81.02
C.P. 33-409	17.96	15.42	85.86	2.5	21.04	4.95	104.15	23.14	81.01
C.P. 31-509	17.01	13.76	80.89	1.2	24.62	4.31	106.11	27.08	79.03
C.P. 34-53	17.48	14.38	82.27	3.3	22.56	4.55	102.65	24.82	77.83
C.P. 33-372	18.15	15.10	83.20	2.6	20.00	4.83	96.60	22.00	74.60
C.P. 33-425	17.96	15.22	84.74	3.0	19.47	4.87	94.82	21.42	73.40
C.P. 36-85	19.10	15.98	83.66	1.8	17.80	5.16	91.85	19.58	72.27
C.P. 34-115	18.34	16.14	88.00	1.4	17.43	5.22	90.98	19.17	71.81
C.P. 29-283	16.82	13.17	78.30	2.0	24.01	4.09	98.20	26.41	71.79
C.P. 34-75	16.82	13.53	80.44	2.5	21.42	4.22	90.39	23.56	66.83
C.P. 36-75	17.86	14.91	83.48	2.8	17.94	4.75	85.22	19.73	65.49
F 31-962	19.29	16.69	86.52	1.6	14.82	5.43	80.47	16.30	64.17
C.P. 36-17	17.39	13.53	77.80	1.3	19.62	4.22	82.80	21.58	61.22
C.P. 33-485	17.77	14.84	83.51	1.2	15.93	4.73	75.35	17.52	57.83
C.P. 36-19	17.48	14.19	81.18	1.5	15.87	4.48	71.10	17.46	53.64
C.P. 35-14	18.62	16.47	88.45	1.2	12.34	5.35	66.02	13.57	52.45
First Stubble (Olivier)									
C.P. 33-310	18.24	14.20	77.85	-----	29.40	$4.48	$131.71	$32.34	$99.37
C.P. 29-120	17.20	13.90	80.81	-----	25.16	4.37	109.95	27.68	82.27
C.P. 34-120	16.82	13.52	80.38	-----	24.33	4.22	102.67	26.76	79.91
C.P. 34-21	16.25	12.65	77.85	-----	27.59	3.89	107.33	30.35	76.98
C.P. 29-116	15.96	11.57	72.49	-----	26.74	3.83	102.41	29.41	73.00
Co. 290	15.68	12.02	76.66	-----	25.72	3.83	98.50	28.29	70.21
C.P. 28-11	17.39	13.71	78.84	-----	21.86	4.29	93.78	24.05	69.73
C.P. 33-372	17.39	13.36	76.83	-----	22.32	4.16	92.85	24.55	68.30
C.P. 29-103	18.53	14.66	79.11	-----	19.17	4.66	89.33	21.09	68.24
Co. 270	16.34	12.94	79.19	-----	21.95	4.00	87.80	24.15	63.65
C.P. 34-79	18.15	15.50	85.40	-----	14.65	4.98	72.96	16.12	56.84
C.P. 29-320	16.72	13.56	81.10	-----	11.95	4.23	50.55	13.15	37.40

NOTES

Fall Plant Cane (Olivier): A total of thirty-six varieties were planted in this test on October 6, 1941 and harvested December 4, 1942. Co. 290 made the best showing with the next highest ranking five varieties in the following order: C.P. 34-21, C.P. 36-55, C.P. 36-62, C.P. 34-120 and C.P. 29-116. The C.P. 33-310 variety ranked ninth, in a total of twenty-nine varieties that were tested.

First Stubble (Olivier): The twenty-four varieties in this test were planted September 26, 1940 and harvested November 17, 1941 and November 7, 1942.

Co. 290 and C.P. 29-116 ranked fifth and sixth respectively. The four leading varieties were in the following order: C.P. 33-310, C.P. 29-120, C.P. 34-120, and C.P. 34-21.

Evaluation of Varieties

The sugar cane varieties of the test fields have been evaluated by the same method used in previous seasons. The calculations are based on the regular "Louisiana Sugar Cane Contract", using a basis of 11½ percent to 12½ percent sucrose in normal juice. The average price of $3.83 per ton of standard cane (11½ percent to 12½ percent sucrose) is the average price of fourteen weekly 96 test raw sugar quotations for the period of October 15, 1942 to January 14, 1943 of the Sugar and Rice Exchange and the Cane Products Trade Association, Inc. of New Orleans, Louisiana. The total harvesting expense per ton cost of $1.10 was used for all varieties of the eight test fields.

TABLE B. Minimum Temperatures at the Test Fields Season of 1942 (January, February, March, November and December) Expressed in Degrees Fahrenheit

Date	Cinclare	Napoleonville	Reserve	Meeker	Cheneyville	Franklin	Broussard
1/2	33	35	39	32	28	38	35
1/3	37	41	39	34	33	39	32
1/4	32	35	36	33	31	36	29
1/5	29	32	33	31	29	33	28
1/6	27	30	31	27	25	32	31
1/7	31	33	32	33	30	35	19
1/8	19	22	23	20	18	23	30
1/9	27	30	24	28	23	35	24
1/10	24	25	27	24	23	27	21
1/11	20	19	23	26	21	22	27
1/12	26	26	27	34	29	29	33
1/13	31	31	31	36	32	35	37
1/21	33	33	36	39	32	38	30
1/22	30	32	35	40	32	39	33
1/23	31	32	36	40	32	37	38
2/2	26	26	28	34	29	32	30
2/12	29	30	35	33	27	33	35
2/19	28	31	34	29	29	33	28
2/21	28	31	34	34	29	33	32
2/28	28	29	32	32	28	33	31
3/2	36	37	38	32	30	38	31
11/12	31	33	36	35	30	37	31
11/23	32	34	36	37	31	35	30
11/24	32	31	36	35	29	35	39
11/27	33	33	39	38	31	40	31
12/2	36	33	40	36	31	39	33
12/10	33	----	37	42	36	36	35
12/14	33	----	37	40	35	40	40
12/17	29	----	34	34	30	34	31
12/29	40	----	38	41	32	34	32

NOTES

The minimum temperature data of Cinclare, Reserve, Cheneyville and Franklin were taken from the "Climatological Data," U. S. Department of Commerce, Weather Bureau, New Orleans, Louisiana. The other three locations were from plantation records, as follows: Elm Hall Plantation, Napoleonville, Louisiana; Meeker Sugar Refining Company, Meeker, Louisiana; and Billeaud Sugar Factory, Broussard, Louisiana.

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SUGAR CANE VARIETIES AT THE TEST FIELDS

Variety	Year Released	Classification	Parentage	Color	Diameter	Growth Habit	Disease Resistance			Stubble Deterioration
							Mosaic	Red Rot	Chlorotic Streak	
C.P. 28-11	1934	C	Co. 281 X U.S. 1694	Green	Small	Erect	1	1	1	1
C.P. 28-19	1934	C	Co. 281 X U.S. 1694	Gr. White	Medium	Reclining	1	3	3	3
C.P. 29-103	1939	C	P.O.J. 2725 X C.P. 1165	Gr. White	Large	Erect	1	1	4	1
C.P. 29-116	1936	C	P.O.J. 2725 X C.P. 1165	Green	Large	Reclining	0	1	1	1
C.P. 29-120	1939	C	P.O.J. 2725 X C.P. 1165	Green	Medium	Sli. Reclining	0	1	3	1
C.P. 29-320	1935	C	Co. 281 X C.P. 27-34	Gr. Brown	Medium	Erect	1	3		2
C.P. 31-509		U***	Co. 281 X C.P. 27-1	Green	Medium	Sli. Reclining	0	1		1
C.P. 31-529		U**	Co. 281 X P.O.J. 2878	Brown	Medium	Erect	0	1		1
C.P. 31-551		U**	Co. 281 X U.S. 1694	Gr. White	Medium	Sli. Reclining	0	2		2
C.P. 32-206		U**	Co. 281 X C.P. 30-23	Gr. Mottled	Medium	Sli. Reclining	0			
C.P. 33-224		U**	C.P. 27-139 X C.P. 31-432	White	Large	Sli. Reclining	0	2		2
C.P. 33-243	1941	C	Co. 281 X U.S. 1694	Red	Large	Erect	3	4	3	2
C.P. 33-253		U*	Co. 281 X U.S. 1694	Brown	Small	Sli. Reclining	4	1		1
C.P. 33-310		U***	C.P. 1165 X C.P. 27-108	Green	Medium	Erect	1	2		1
C.P. 33-372		U**	C.P. 1165 X C.P. 28-44	Gr. White	Medium	Erect	1	2		1
C.P. 33-409		U**	Co. 281 X U.S. 1694	Brown	Small	Sli. Reclining	0			1
C.P. 33-425		U**	Co. 281 X U.S. 1694	Red	Medium	Erect	0	2		1
C.P. 33-485		U*	C.P. 1165 X C.P. 27-108	Brown	Medium	Semi-Erect	0	1		1
C.P. 34-1		U**	Co. 281 X U.S. 1694	Br. Green	Medium	Semi-Erect	0	1		1
C.P. 34-21		U**	U.S. 1643 X C.P. 29-284	Gr. Yellow	Small	Cons. Reclining	0	1		1
C.P. 34-53		U***	Co. 281 X P.O.J. 2878	Brown	Medium	Erect		1		1
C.P. 34-54		U*	Co. 281 X C.P. 1165	Y. Green	Medium	Erect	0	2		
C.P. 34-75		U*	P. 33-30 X C.P. 1161	Gr. White	Medium	Sli. Reclining	2	1		3
C.P. 34-77		U*	P. 33-30 X C.P. 1161	Gr. White	Medium	Sli. Reclining	0			4
C.P. 34-79		U*	P. 33-30 X C.P. 1161	Gr. Brown	Medium	Erect	0	4		4
C.P. 34-80		U*	P. 33-30 X C.P. 1161	Green	Large	Cons. Reclining	0	3		4
C.P. 34-86		U*	Co. 281 X U.S. 1694	Red	Medium	Semi-erect	0	3		
C.P. 34-92		U***	Co. 281 X C.P. 1165	Brown	Medium	Erect	1	3		
C.P. 34-115		U**	P.O.J. 2725 X C.P. 1161	Green	Large	Sli. Reclining	0	4		
C.P. 34-120	1942	C	Co. 281 X P.O.J. 2878	Green	Medium	Sli. Reclining	1	3		1
C.P. 34-139		U**	P.O.J. 2725 X C.P. 1165	Green	Large	Sli. Reclining	0		1	
C.P. 34-141		U**	P.O.J. 2725 X C.P. 1161	Y. Green	Large	Erect	0			
C.P. 34-143		U**	P.O.J. 2725 X C.P. 1161	Red	Large	Erect	1			
C.P. 35-14		U**	C.P. 31-78 selfed	Green	Large	Sli. Reclining	0			
C.P. 36-17		U*	Co. 281 X C.P. 1165	Green	Small	Erect	0	4		
C.P. 36-19		U*	Co. 281 X C.P. 1165	Green	Small	Erect	1	3		
C.P. 36-55		U***	Co. 281 X U.S. 1694	Gr. White	Small	Sli. Reclining	0	3		
C.P. 36-62		U**	P.O.J. 2725 X C.P. 1165	Green	Large	Sli. Reclining	0	2		
C.P. 36-70		U**	P.O.J. 2725 X C.P. 1165	Green	Large	Sli. Reclining	0			
C.P. 36-75		U***	P.O.J. 2725 X C.P. 1165	Green	Large	Sli. Reclining	0	1		
C.P. 36-85		U**	P.O.J. 2725 X C.P. 1165	Gr. White	Large	Sli. Reclining	1			
C.P. 36-105		U***	Co. 281 X C.P. 1165	Purplish	Medium	Erect	0	1		
C.P. 36-191		U**	P.O.J. 2725 X C.P. 1165	Green	Large	Cons. Reclining	0	1		
F. 31-962		U**		Gr. Brown	Medium	Erect	1	4		
Co. 290	1933	C	Co. 221 X D-74	Reddish-Brown	Large	Erect	4	3	0	2

*–Discarded or subject to be discarded
**–Promising
***–Very promising
C–Commercial canes
U–Unreleased varieties

Disease Resistance: 0–Immune
1–Resistant
2–Moderately resistant
3–Susceptible
4–Very susceptible

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Results of Sugarcane Variety Tests in Louisiana During 1942

By George Arceneaux, Agronomist, L. P. Hebert, Junior Agronomist, and C. C. Krumbhaar, Agent, Division of Sugar Plant Investigation, Bureau of Plants Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.

This report summarizes results of sugarcane variety tests conducted by the United States Department of Agriculture in Louisiana during 1942. The scope of the work and methods of experimental technique employed were essentially as described in previous reports. Tests during 1942 were made on 10 plantations covering a variety of growing conditions considered representative of the Louisiana Sugarcane District.

Tests on Light Soils

Tables 1, 2, 3, 4, and 5 give results of plant cane, first stubble, and second stubble tests on Yazoo very fine sandy loam and other light-textured soils. In the plant cane tests (table 1) were 24 varieties, including 9 of the varieties now released for commercial culture and 15 others which had demonstrated promise in previous tests. In stubble tests (tables 2,

TABLE 1.—Results of plant cane variety tests on light soils in Louisiana during 1942.

Variety	Greenwood (Thibodaux) 11-30 [1]	Godchaux (Raceland) 12-2	Oaklawn (Franklin) 11-11	Albania (Jeanerette) 11-18	L. J. Landry (New Iberia) 11-17	Roland's Farm (Erath) 11-16	Stella (St. Martinville) 11-12	Alma (Lakeland) 11-23	Rosewood (Hamburg) 11-26	Average
Average yield of cane per acre (tons)										
Co. 281	27.2	23.1	19.6	21.3	20.8	15.3	21.2	24.2	24.5	21.91
Co. 290	42.1	34.2	22.9	34.5	35.3	24.6	32.7	35.2	37.6	33.23
C.P. 28/19	27.4	27.5	19.5	20.4	20.6	17.4	23.1	20.2	23.0	22.12
C.P. 29/103	32.1	31.1	23.4	18.0	25.1	18.7	27.4	28.1	30.3	26.02
C.P. 29/116	36.6	42.8	27.7	31.5	31.6	24.0	34.1	40.7	40.4	34.38
C.P. 29/120	27.3	33.7	20.9	16.3	23.6	18.2	26.3	25.1	25.9	24.14
C.P. 29/320	30.1	30.7	18.1	22.4	18.6	11.1	25.8	26.3	24.2	23.03
C.P. 31/509	39.7	41.6	22.8	27.4	32.5	21.5	30.9	25.1	30.3	30.20
C.P. 31/529	30.6	30.4	19.8	20.8	26.4	20.3	24.9	31.1	28.0	25.81
C.P. 32/206	25.3	23.4	15.8	18.4	22.4	16.5	23.7	23.2	22.0	21.19
C.P. 33/243	30.1	36.4	21.2	26.9	26.4	18.9	23.7	29.7	28.9	26.91
C.P. 33/372	28.6	33.2	18.9	18.9	23.9	16.4	20.5	26.2	22.6	23.24
C.P. 33/409	27.2	29.3	24.6	21.8	23.7	16.2	18.9	23.1	23.9	23.19
C.P. 34/1	38.2	34.7	24.4	24.9	28.5	20.4	27.6	30.4	30.3	28.82
C.P. 34/21	31.4	38.5	20.0	23.9	32.1	20.2	28.1	31.9	31.1	28.58
C.P. 34/53	33.4	30.7		26.1	27.3	18.0	25.4	27.9	26.3	26.26[2]
C.P. 34/54	32.7	34.2		25.4	27.0	17.9	24.6	26.7	23.9	25.92[2]
C.P. 34/75	34.4	26.6		22.8	28.2	18.1	26.3	29.1	30.7	26.40[2]
C.P. 34/80	34.2	34.7		23.7	30.1	20.7	27.7	30.4	29.0	28.18[2]
C.P. 34/86	37.0	26.0		25.1	33.0	21.8	28.0	31.7	25.4	27.87[2]
C.P. 34/92	35.1	32.9		28.8		19.4	28.5	34.6	29.9	29.27[2]
C.P. 34/115	40.1	35.9		24.4	36.7	20.4	29.8	32.2	32.0	30.81[2]
C.P. 34/120	32.9	37.7	24.1	26.5		20.7	29.0	34.0	33.9	29.94[2]
C.P. 34/139	40.0	34.9	23.3	27.2		18.7	27.6	32.1	36.2	30.09[2]
Difference										
For P.=.05	3.95	7.10	4.49	2.94	4.17	3.35	2.73	4.37	4.42	2.42
For P.=.01	5.25	9.43	5.95	3.91	5.55	4.45	3.62	5.80	5.87	3.19
Average indicated yield of 96° sugar per ton of cane (pounds)[3]										
Co. 281	191.9	187.5	202.3	223.2	237.3	222.8	206.1	211.5	210.6	209.3
Co. 290	186.9	202.1	195.7	204.6	192.2	198.9	198.2	168.6	162.2	189.0
C.P. 28/19	208.3	193.2	238.0	238.1	258.7	259.2	178.7	244.4	242.2	226.0
C.P. 29/103	183.3	183.6	214.8	227.7	218.5	223.3	196.3	192.8	205.4	202.4
C.P. 29/116	170.9	158.3	192.6	181.5	183.7	195.3	188.2	182.1	157.8	177.0
C.P. 29/120	192.3	193.7	206.2	227.7	226.6	235.5	214.6	199.8	203.0	208.7
C.P. 29/320	199.9	200.5	213.7	212.8	234.2	235.9	214.6	202.4	202.9	210.1
C.P. 31/509	180.8	189.4	182.9	197.8	172.6	203.3	181.8	195.7	183.7	186.6
C.P. 31/529	178.4	182.3	203.2	178.9	173.7	185.9	193.6	170.5	171.7	181.0
C.P. 32/206	221.6	222.4	209.3	249.2	237.7	239.2	217.1	200.8	229.3	224.5
C.P. 33/243	192.7	193.8	201.2	202.2	215.7	213.4	220.1	210.9	201.9	204.8
C.P. 33/372	182.9	191.7	199.2	206.0	196.5	204.7	199.8	176.6	191.0	192.9
C.P. 33/409	192.3	182.8	191.0	212.6	213.8	218.2	199.9	170.5	189.1	195.3
C.P. 34/1	157.2	168.1	173.2	181.5	176.3	185.8	173.7	189.9	181.0	175.2
C.P. 34/21	187.1	165.9	207.1	208.9	194.6	220.9	179.8	181.5	174.5	188.1
C.P. 34/53	183.3	170.4		194.6	188.9	211.2	191.7	174.4	201.2	188.3[2]
C.P. 34/54	154.4	157.9		180.0	157.6	181.0	176.2	167.5	161.5	166.1[2]
C.P. 34/75	168.3	162.3		213.1	169.8	222.9	190.7	180.4	179.6	183.6[2]
C.P. 34/80	184.9	193.2		215.5	181.1	223.4	193.7	188.2	185.0	194.2[2]
C.P. 34/86	182.5	169.2		198.4	179.6	201.1	195.5	193.4	188.3	188.2[2]
C.P. 34/92	178.6	181.1		190.0		204.7	184.6	173.5	191.0	185.9[2]
C.P. 34/115	182.8	182.8		223.3	186.3	222.5	187.8	172.1	163.6	187.7[2]
C.P. 34/120	189.3	189.1	198.4	208.3		211.2	198.2	196.2	193.1	197.3[2]
C.P. 34/139	153.7	163.5	193.5	192.7	180.0	198.6	198.1	162.8	142.9	172.5
Difference										
For P.=.05	13.23	16.59	14.23	13.78	17.01	14.99	21.82	18.88	14.17	10.87
For P.=.01	17.56	22.04	18.90	18.30	22.63	19.90	28.97	25.07	18.81	14.34
Average indicated yield of 96° sugar per acre (pounds)										
Co. 281	5,220	4,331	3,965	4,754	4,936	3,409	4,369	5,119	5,160	4,585
Co. 290	7,868	6,912	4,482	7,059	6,785	4,893	6,481	5,935	6,099	6,279
C.P. 28/19	5,707	5,313	4,641	4,857	5,329	4,510	4,128	4,937	5,571	4,999
C.P. 29/103	5,884	5,710	5,026	4,099	5,484	4,176	5,379	5,418	6,224	5,267
C.P. 29/116	6,255	6,775	5,335	5,717	5,805	4,687	6,418	7,412	6,375	6,087
C.P. 29/120	5,250	6,528	4,310	3,712	5,348	4,286	5,644	5,015	5,258	5,039
C.P. 29/320	6,017	6,155	3,868	4,767	4,356	2,618	5,537	5,323	4,910	4,839
C.P. 31/509	7,178	7,879	4,170	5,420	5,609	4,371	5,618	4,912	5,566	5,636
C.P. 31/529	5,459	5,542	4,023	3,721	4,586	3,774	4,821	5,302	4,808	4,671
C.P. 32/206	5,606	5,204	3,307	4,585	5,324	3,947	5,145	4,659	5,045	4,758
C.P. 33/243	5,800	7,054	4,265	5,439	5,694	4,033	5,216	6,264	5,835	5,511
C.P. 33/372	5,231	6,364	3,765	3,893	4,696	3,357	4,096	4,627	4,317	4,483
C.P. 33/409	5,231	5,356	4,699	4,635	5,067	3,535	3,778	3,939	4,519	4,529
C.P. 34/1	6,005	5,833	4,226	4,519	5,025	3,790	4,794	5,773	5,484	5,050
C.P. 34/21	5,875	6,387	4,142	4,993	6,247	4,462	5,052	5,790	5,427	5,375
C.P. 34/53	6,122	5,231		5,079	5,157	3,802	4,869	4,866	5,292	4,945[2]
C.P. 34/54	5,049	5,400		4,572	4,255	3,240	4,335	4,472	3,860	4,305[2]
C.P. 34/75	5,790	4,317		4,859	4,788	4,034	5,015	5,250	5,514	4,846[2]
C.P. 34/80	6,324	6,074		5,107	5,451	4,624	5,365	5,721	5,365	5,473[2]
C.P. 34/86	6,752	4,399		4,980	5,927	4,384	5,474	6,131	4,783	5,245[2]
C.P. 34/92	6,269	5,958		5,472		3,971	5,261	6,003	5,711	5,442[2]
C.P. 34/115	7,298	6,563		5,449	6,837	4,539	5,596	5,542	5,235	5,783[2]
C.P. 34/120	6,228	7,129	4,781	5,520		4,372	5,748	6,671	6,546	5,907[2]
C.P. 34/139	6,148	5,706	4,509	5,241		3,714	5,468	5,226	5,173	5,192[2]
Difference										
For P.=.05	481	605	493	434	513	448	470	523	496	388
For P.=.01	638	804	655	577	683	595	624	694	659	513

[1] Date of harvest.

[2] Average based on an assumed value for missing yield calculated according to Yates formula for determining missing plot values. (Paterson, D. D. Statistical Technique in Agricultural Research pp. 181-188)

[3] Weight average values given in this and subsequent tables.

TABLE 2.—Results of first stubble variety tests on light soils in Louisiana during 1942.

Variety	Greenwood (Thibodaux) 11-4 [1]	Godchaux (Raceland) 11-2	Oaklawn (Franklin) 11-12	Albania (Jeanerette) 10-26	L. J. Landry (New Iberia) 10-28	Roland's Farm (Erath) 10-29	Stella (St. Martinville 11-12	Alma (Lakeland) 11-23	Rosewood (Hamburg) 11-26	Average
Average yield of cane per acre (tons)										
Co. 281	10.3	20.6	7.7	9.0	5.9	10.8	14.4	23.2	15.8	13.08
Co. 290	23.9	30.8	17.3	18.4	18.3	21.8	26.7	29.2	25.4	23.53
C.P. 28/19	19.7	28.5	10.6	13.8	7.4	10.8	22.1	25.5	12.5	16.77
C.P. 29/103	11.7	18.2	8.6	9.1	12.8	7.8		31.0	25.6	15.92[2]
C.P. 29/116	23.1	34.6	11.0	17.0	16.4	18.6	26.3	41.2	33.9	24.68[2]
C.P. 29/120	22.1	32.3	18.5	13.8	14.6	14.8		31.8	26.9	22.16[2]
C.P. 29/320	16.8	21.4	9.3	14.9	8.5	9.0	16.9	22.5	25.1	16.04
Difference										
For P.=.05	3.66	4.23	5.54	2.51	1.53	2.05	2.70	5.33	3.68	3.23
For P.=.01	4.96	5.74	7.51	3.40	2.07	2.78	3.79	7.23	4.98	4.31
Average indicated yield of 96° sugar per ton of cane (pounds)										
Co. 281	148.9	155.7	209.9	198.9	206.2	196.4	218.3	222.4	231.2	198.7
Co. 290	161.9	161.9	208.4	205.0	192.1	194.0	196.1	191.7	201.5	190.3
C.P. 28/19	174.9	166.9	233.9	222.2	228.6	235.2	176.4	251.3	247.6	215.2
C.P. 29/103	159.8	146.1	217.5	214.7	206.0	201.5		211.7	233.8	200.4[2]
C.P. 29/116	156.1	162.9	205.8	191.5	187.4	183.4	184.9	182.2	190.0	182.7
C.P. 29/120	168.6	168.8	224.9	224.7	206.7	211.6		221.9	240.5	206.4[2]
C.P. 29/320	162.3	171.6	211.3	216.1	201.0	206.3	197.8	210.1	236.6	201.5
Difference										
For P.=.05	12.37	20.73	6.25	9.00	10.57	16.27	17.58	11.96	11.03	10.61
For P.=.01	16.76	28.09	8.47	12.20	14.32	22.05	24.64	16.21	14.94	14.17
Average indicated yield of 96° sugar per acre (pounds)										
Co. 281	1,534	3,207	1,616	1,790	1,217	2,121	3,144	5,160	3,653	2,605
Co. 290	3,869	4,987	3,605	3,772	3,515	4,229	5,236	5,598	5,118	4,437
C.P. 28/19	3,446	4,757	2,479	3,066	1,692	2,540	3,898	6,408	3,095	3,487
C.P. 29/103	1,870	2,644	1,870	1,954	2,637	1,572		6,563	5,985	3,190[2]
C.P. 29/116	3,606	5,636	2,264	3,255	3,073	3,411	4,863	7,507	6,441	4,451
C.P. 29/120	3,726	5,452	4,161	3,101	3,018	3,132		7,056	6,469	4,573[2]
C.P. 29/320	2,727	3,672	1,965	3,220	1,708	1,857	3,343	4,727	5,939	3,240
Difference										
For P.=.05	411	505	267	367	301	362	549	554	475	415
For P.=.01	557	685	362	497	408	491	770	750	643	551

[1] Date of harvest.

[2] Average based on an assumed value for missing yield calculated according to Yates formula for determining missing plot values. (Paterson, D. D. Statistical Technique in Agricultural Research pp. 181-188)

3, 4, and 5) commercial and advanced selections were included in one series of tests (main tests) and seedlings in earlier stages of selection were tested separately (preliminary tests).

Space will not permit a detailed analysis of results of all tests. Complete tabular data are included as a matter of record and discussions will be limited to most important trends as observed in released and promising unreleased varieties. Plant cane yields on the whole were satisfactory, but yields of first stubble and especially second stubble of several of the important varieties dropped to very low levels.

Co. 281 gave fair plant cane yields but very poor first and second stubble results in the average of all tests.

Co. 290 gave yields considerably below customary levels in all three crops. Second stubble yields were unusually low for this variety.

Plant cane yields from C.P. 28/19 were fair and showed up to best advantage at Greenwood and Raceland. Second stubble yields were very low. First stubble yields while satisfactory at Greenwood, Raceland, and Alma were rather uniformly poor at other places.

Yields of cane from C.P. 29/103 were relatively less satisfactory than yields during previous years. This was especially true in the case of first stubble tests at Oaklawn, Albania, and Erath.

In plant cane and first stubble tests C.P. 29/116 gave average yields of cane per acre slightly but insignificantly better than yields from Co. 290, with average yields of sugar per acre slightly below those of Co. 290 in plant cane tests and equal to those of Co. 290 in first stubble tests. C.P. 29/116 did not occur in second stubble tests.

It is interesting to note that C.P. 29/116 gave its relatively best yields of cane per acre at Rosewood and Alma. This trend is conclusively borne out in the results of previous tests. While the variety's late maturing qualities present a serious disadvantage in its cultivation for sugar in that section it is possible that its superior yield qualities might be utilized there to advantage in the production of sirup.

C.P. 29/320 again proved inferior to C.P. 28/19 in indicated yields of sugar per ton of cane and per acre with average differences as to the latter ranging from 160 pounds in plant cane to 465 in second stubble tests.

C.P. 29/120 surpassed C.P. 29/320 in indicated yield of sugar per acre by average differences ranging from 200 pounds per acre in plant cane tests to 1333 pounds per acre in first stubble tests. It also proved on the whole slightly superior to C.P. 29/320 in indicated yield of sugar per ton of cane.

C.P. 33/243 gave very satisfactory yields as plant cane but proved a weak stubbler.

Results obtained with the newly released variety C.P. 34/120 are of special interest. From results of all tests so far conducted this variety may be expected to compare favorably with Co. 290 in yield of sugar per acre. The very satisfactory performance of C.P. 34/120 at Rosewood and Alma is considered worthy of note. In indicated yield of sugar per ton of cane C.P. 34/120 proved inferior to Co. 281 and C.P. 29/320 but, on the whole, definitely superior to Co. 290.

TABLE 3.—Results of second stubble variety tests on light soils in Louisiana during 1942.

Variety	Godchaux (Raceland) 10-14[1]	Alma (Lakeland) 10-19	Albania (Jeanerette) 10-26	Average
Average yield of cane per acre (tons)				
Co. 281	4.2	8.4	1.1	4.57
Co. 290	13.6	16.2	7.6	12.47
C.P. 28/19	12.3	12.6	4.2	9.70
C.P. 29/103	13.4	17.6	5.4	12.13
C.P. 29/120	13.3	22.4	5.2	13.63
C.P. 29/320	12.5	6.5	3.4	7.47
Difference				
For P. =.05	2.30	5.82	2.45	5.40
For P. =.01	3.14	7.94	3.36	7.69
Average indicated yield of 96° sugar per ton of cane (pounds)				
Co. 281	146.6	156.6	185.9	155.8
Co. 290	159.6	147.2	181.5	158.6
C.P. 28/19	168.8	187.2	218.1	183.9
C.P. 29/103	164.9	174.8	218.7	177.7
C.P. 29/120	183.4	180.0	219.0	186.1
C.P. 29/320	174.1	168.4	201.5	176.6
Difference				
For P. =.05	11.94	13.71	12.97	13.25
For P. =.01	16.29	18.71	17.70	18.85
Average indicated yield of 96° sugar per acre (pounds)				
Co. 281	616	1,315	204	712
Co. 290	2,171	2,385	1,379	1,978
C.P. 28/19	2,076	2,359	916	1,784
C.P. 29/103	2,210	3,076	1,181	2,156
C.P. 29/120	2,439	4,032	1,139	2,537
C.P. 29/320	2,176	1,095	685	1,319
Difference				
For P. =.05	330	495	342	496
For P. =.01	450	675	468	705

[1] Date of harvest.

TABLE 4.—Results on first stubble preliminary variety tests on light soils in Louisiana during 1942

Variety	Greenwood (Thibodaux) 11-4[1]	Godchaux (Raceland) 11-2	Oaklawn (Franklin) 11-10	Albania (Jeanerette) 10-26	L. J. Landry (New Iberia) 10-28	Roland's Farm (Erath) 10-29	Alma (Lakeland) 11-23	Rosewood (Hamburg) 11-26	Average
Yield of cane per acre (tons)									
Co. 281	10.8	14.5	9.9	4.4	5.2	9.3	20.0	18.9	11.62
C.P. 31/509	29.3	30.5	17.1	8.9	18.9	15.3	36.7	26.9	22.95
C.P. 31/529	25.7	23.9	19.1	15.2	13.6	12.0	33.3	25.7	21.06
C.P. 32/206	18.9	24.3	12.5	8.1	12.4	14.9	28.7	17.6	17.17
C.P. 33/224	9.6	20.3	14.3	4.0	8.4	16.9	11.6	9.1	11.77
C.P. 33/243	10.2	22.8	10.1	8.9	10.7	15.6	20.0	18.0	14.54
C.P. 33/372	23.8	31.5	14.8	14.7	13.3	14.3	25.2	22.9	20.06
C.P. 33/409	18.5	24.1	16.9	13.2	14.7	12.9	27.9	21.6	18.72
C.P. 34/1	26.6	36.1	19.5	15.9	21.5	23.3	37.3	27.1	25.91
C.P. 34/21	18.8	27.9	14.5	11.2	15.1	19.5	31.2	23.9	20.26
C.P. 34/77	3.2	17.9	1.7	1.1	1.3	2.9	20.9	13.5	7.81
C.P. 34/79	11.4	24.3	6.1	5.3	5.3	8.5	25.9	20.1	13.36
C.P. 34/80	18.6	32.5		6.5	6.1	7.2	29.9	27.1	17.67[2]
C.P. 34/120	23.8	33.6	19.6	17.2	17.3	20.8	39.1	28.8	25.02
Difference									
For P.=.05	3.77	4.52	2.65	2.53	3.84	3.38	5.65	5.86	3.39
For P.=.01	5.10	6.11	4.87	3.42	5.19	4.58	7.64	7.93	4.49
Average indicated yield of 96° sugar per ton of cane (pounds)									
Co. 281	160.4	156.5	214.6	192.1	189.4	185.6	215.1	231.0	197.4
C.P. 31/509	153.8	167.5	205.8	187.1	178.6	165.6	192.7	196.8	180.1
C.P. 31/529	149.8	159.3	216.2	194.0	177.9	166.7	187.2	201.3	181.4
C.P. 32/206	168.5	194.7	233.1	220.2	196.0	206.6	213.4	238.2	207.0
C.P. 33/224	156.1	162.4	207.6	192.9	175.4	175.7	203.0	215.9	183.7
C.P. 33/243	155.7	172.8	224.0	199.3	191.7	183.5	213.7	236.6	197.8
C.P. 33/372	152.6	170.8	211.2	202.6	175.4	186.8	186.5	212.8	185.0
C.P. 33/409	164.3	163.9	227.9	208.9	216.0	190.5	193.5	219.1	196.0
C.P. 34/1	145.7	141.3	208.5	181.8	171.5	150.5	193.1	204.0	173.0
C.P. 34/21	173.5	176.7	228.4	202.2	207.4	198.9	208.5	218.2	200.5
C.P. 34/77	135.1	154.4	185.8	177.2	164.3	181.2	176.2	200.3	173.4
C.P. 34/79	185.3	193.7	227.7	207.9	183.8	206.7	210.9	237.2	208.4
C.P. 34/80	150.2	174.2		189.0	167.5	201.3	217.3	217.3	194.4[2]
C.P. 34/120	171.5	163.4	232.6	205.1	188.3	184.1	204.2	217.9	194.9
Difference									
For P.=.05	14.59	15.50	16.10	16.03	16.83	12.17	19.03	9.66	8.49
For P.=.01	19.74	20.96	21.81	21.66	22.77	16.50	25.72	13.07	11.24
Average indicated yield of 96° sugar per acre (pounds)									
Co. 281	1,732	2,269	2,125	845	985	1,726	4,302	4,366	2,294
C.P. 509	4,506	5,109	3,519	1,665	3,376	2,534	7,072	5,294	4,134
C.P. 31/529	3,850	3,807	4,129	2,949	2,419	2,000	6,234	5,173	3,820
C.P. 32/206	3,185	4,731	2,914	1,784	2,430	3,078	6,125	4,192	3,555
C.P. 33/224	1,499	3,297	2,969	772	1,473	2,969	2,355	1,965	2,162
C.P. 33/243	1,588	3,940	2,262	1,774	2,051	2,863	4,274	4,259	2,876
C.P. 33/372	3,632	5,380	3,126	2,978	2,333	2,671	4,700	4,873	3,712
C.P. 33/409	3,040	3,950	3,852	2,757	3,175	2,457	5,399	4,733	3,670
C.P. 34/1	3,876	5,101	4,066	2,891	3,687	3,507	7,203	5,528	4,482
C.P. 34/21	3,262	4,930	3,312	2,265	3,132	3,879	6,505	5,215	4,062
C.P. 34/77	432	2,764	316	195	214	525	3,683	2,704	1,354
C.P. 34/79	2,112	4,707	1,389	1,102	974	1,757	5,462	4,768	2,784
C.P. 34/80	2,794	5,662		1,228	1,022	1,449	6,497	5,889	3,435[2]
C.P. 34/120	4,082	5,490	4,559	3,528	3,258	3,829	7,984	6,276	4,876
Difference									
For P.=.05	421	489	404	367	432	401	585	552	398
For P.=.01	569	661	548	495	584	544	790	747	528

[1] Date of harvest.

[2] Average based on an assumed value for missing yield calculated according to Yates formula for determining missing plot values. (Paterson, D. D. Statistical Technique in Agricultural Research pp. 181-188)

TABLE 5.—Results of second stubole preliminary variety tests on light soils in Louisiana during 1942.

Variety	Alma (Lakeland) 10-19[1]	Godchaux (Raceland) 10-14	Average
Average yield of cane per acre (tons)			
Co. 281	7.3	5.2	6.25
C.P. 29/137	15.2	9.6	12.40
C.P. 31/509	18.9	16.0	17.45
C.P. 32/206	18.1	11.3	14.70
C.P. 32/324	6.5	10.1	8.30
C.P. 33/233	22.1	12.0	17.05
C.P. 33/243	9.3	8.1	8.70
C.P. 33/253	25.2	11.5	18.35
C.P. 33/372	21.2	16.1	18.65
C.P. 33/409	22.3	13.1	17.70
C.P. 34/79	7.1	6.7	6.90
Difference			
For P.=.05	4.79	4.09	7.80
For P.=.01	6.51	5.56	11.09
Average indicated yield of 96° sugar per ton of cane (pounds)			
Co. 281	150.2	142.1	146.7
C.P. 29/137	178.8	159.6	171.4
C.P. 31/509	136.8	163.2	148.9
C.P. 32/206	157.3	160.5	158.5
C.P. 32/324	163.8	152.6	157.0
C.P. 33/233	114.0	146.1	125.3
C.P. 33/243	163.9	168.5	166.0
C.P. 33/253	165.3	175.5	168.5
C.P. 33/372	149.8	168.4	157.8
C.P. 33/409	152.5	156.0	153.8
C.P. 34/79	177.3	172.1	174.8
Difference			
For P.=.05	14.17	16.75	25.03
For P.=.01	19.26	22.76	35.60
Average indicated yield of 96° sugar per acre (pounds)			
Co. 281	1,096	739	917
C.P. 29/137	2,718	1,532	2,125
C.P. 31/509	2,586	2,611	2,598
C.P. 32/206	2,847	1,814	2,330
C.P. 32/324	1,065	1,541	1,303
C.P. 33/233	2,519	1,753	2,136
C.P. 33/243	1,524	1,365	1,444
C.P. 33/253	4,166	2,108	3,092
C.P. 33/372	3,176	2,711	2,943
C.P. 33/409	3,401	2,044	2,722
C.P. 34/79	1,259	1,153	1,206
Difference			
For P.=.05	445	414	590
For P.=.01	605	562	840

[1] Date of harvest.

Next in point of interest are results obtained with C.P. 32/206, 29/137, and 34/115, varieties which are considered suitable for windrowing purposes. In the average of plant cane as well as first stubble and second stubble tests (tables 1, 4, and 5) C.P. 32/206 again proved consistently superior to Co. 281 in yields of sugar per ton of cane and per acre, the advantage being most pronounced in stubble tests. In the average of the 3 crops C.P. 32/206 surpassed Co. 281 by more than 900 pounds of sugar per acre.

In second stubble tests (table 5) C.P. 29/137 proved slightly inferior to C.P. 32/206 in yield of sugar per acre but definitely superior to Co. 281 in this regard.

C.P. 34/115, which occurred in plant cane tests only, (table 1) surpassed Co. 281 by an average difference of nearly 1200 pounds of sugar per acre, and surpassed C.P. 32/206 by more than 1000 pounds of sugar per acre. This variety was approximately on a par with Co. 290 in indicated yield of sugar per ton of cane, but was inferior to Co. 281 and C.P. 32/206 in that respect.

In line with result durings previous years, C.P. 31/509, 33/372 and 33/409 gave satisfactory yields of cane and sugar per acre and gave exceptionally good stubble crops under the prevailing conditions. It appears doubtful however that any one of these can compete with C.P. 34/120 in production of sugar per acre.

Among the more recent introductions at test fields, C.P. 34/1, 34/21, 34/92 and 34/139 have demonstrated some promise. However C.P. 34/1 and 34/

139 have been rather consistently below Co. 290 in indicated sugar content which would greatly limit their usefulness. C.P. 34/21 lodges very badly.

Tests on Heavy Soils

Tables 6, 7, and 8 summarize results of tests on Sharkey Clay and similar heavy soils at different localities.

Co. 290 gave fairly satisfactory yields of cane and sugar in plant cane and first stubble tests but very poor yields in the one second stubble test at Alma.

C.P. 807 gave yields of cane and sugar per acre below those from Co. 290 in plant cane and first stubble, and made a failure as second stubble.

C.P. 28/11 gave indicated yields of sugar per acre approximately equal to those of Co. 290 in the average of plant cane and first stubble tests, and greatly outyielded Co. 290 in the single second stubble tests. It also surpassed Co. 290 in indicated yield of sugar per ton of cane in the average of all tests.

C.P. 29/103 gave relatively satisfactory results in plant cane and in the single second stubble tests, but was the lowest of the group in first stubble yield of sugar per acre.

C.P. 29/116 slightly surpassed Co. 290 in yields of cane and sugar per acre in plant cane and first stubble tests and exceeded the latter by nearly 1400 pounds of sugar per acre in the one second stubble test. In indicated yield of sugar per ton of cane, C.P. 29/116 was slightly below Co. 290 in plant cane and first stubble and significantly below Co. 290 in the one second stubble test.

C.P. 29/120 occurred in first and second stubble tests only, where it outyielded Co. 290 in sugar per acre by average differences of approximately 900 and 1400 pounds, respectively. It likewise greatly exceeded Co. 290 in indicated yield of sugar per ton of cane.

C.P. 34/120, 31/509, 33/372, and 33/409 occurred in plant cane tests only. It is interesting to note that C.P. 34/120 was the highest variety of the group in indicated yield of sugar per acre and was among the highest in indicated yield of sugar per ton of cane. C.P. 31/509 equaled Co. 290, while C.P. 33/372 and C.P. 33/409 were significantly below the latter in indicated yield of sugar per acre. C.P. 33/372 and C.P. 33/409 compared favorably with Co. 290 in indicated yield of sugar per ton of cane.

TABLE 6.—Results of plant cane variety tests on heavy soil in Louisiana during 1942.

Variety	Greenwood (Thibodaux) 12-1[1]	Oaklawn (Franklin) 11-12	Alma (Lakeland) 11-23	Station (Houma) 12-1	Average
Average yield of cane per acre (tons)					
Co. 290	24.7	15.8	24.6	18.7	20.95
C.P. 807	18.6	16.5	14.6	19.2	17.22
C.P. 28/11	23.9	14.2	22.0	18.4	19.62
C.P. 29/103	19.0	16.9	22.9	19.1	19.47
C.P. 29/116	26.3	13.6	30.4	21.2	22.87
C.P. 31/509	25.1	17.7	23.5	18.4	21.17
C.P. 33/372	18.9	16.2	19.5	16.3	17.72
C.P. 33/409	19.2	15.6	18.8	15.4	17.25
C.P. 34/120	26.6	15.8	27.1	19.8	22.32
Difference					
For P.=.05	3.74	3.56	3.63	2.73	3.78
For P.=.01	5.06	4.85	4.92	3.66	5.13
Average indicated yield of 96° sugar per ton of cane (pounds)					
Co. 290	189.8	198.7	193.7	201.5	195.2
C.P. 807	193.5	187.9	184.5	179.8	186.5
C.P. 28/11	217.3	220.7	206.8	214.2	214.3
C.P. 29/103	217.1	229.6	232.3	180.1	215.3
C.P. 29/116	179.5	194.6	198.4	201.3	193.1
C.P. 31/509	194.8	200.1	189.0	192.4	193.8
C.P. 33/372	195.9	201.9	186.5	174.7	189.9
C.P. 33/409	202.2	205.1	197.2	194.1	199.7
C.P. 34/120	205.0	194.7	208.8	204.2	204.2
Difference					
For P.=.05	11.38	17.65	12.81	12.13	14.91
For P.=.01	15.42	23.94	17.36	16.27	20.20
Average indicated yield of 96° sugar per acre (pounds)					
Co. 290	4,688	3,139	4,765	3,768	4,090
C.P. 807	3,599	3,100	2,694	3,452	3,211
C.P. 28/11	5,193	3,134	4,550	3,941	4,204
C.P. 29/103	4,125	3,880	5,320	3,440	4,191
C.P. 29/116	4,721	2,647	6,031	4,268	4,417
C.P. 31/509	4,889	3,542	4,441	3,540	4,103
C.P. 33/372	3,703	3,271	3,637	2,848	3,365
C.P. 33/409	3,882	3,200	3,707	2,989	3,444
C.P. 34/120	5,453	3,076	5,658	4,013	4,557
Difference					
For P.=.05	454	456	458	390	465
For P.=.01	616	620	620	524	631

[1] Date of harvest.

Tests on Muck Soil

Table 9 summarizes results of plant cane, first and second stubble tests on muck soil. On soils of this type the prime problem has been to find a variety which will attain a satisfactory degree of maturity under existing conditions of high fertility. In tests during the past only C.P. 28/19 has proved consistently satisfactory in this regard, but this variety is subject to severe lodging and cannot ordinarily be harvested mechanically with any degree of success under existing conditions.

Of the erect varieties included in all tests during 1942 C.P. 29/320 most nearly approached C.P. 28/19 in indicated yield of sugar per ton of cane. This variety, however, besides being consistently below C.P. 28/19 in sugar per ton of cane, averaged more than 300 pounds of sugar per acre under C.P. 28/19 in plant cane, first and second stubble crops.

C.P. 33/253 and C.P. 33/243, other varieties which could be harvested mechanically, had attained comparatively satisfactory levels of maturity by the time first stubble and plant cane tests were harvested (November 5 and December 7, respectively) but had failed to ripen satisfactorily at the time second stubble tests were harvested (October 15). The exceptionally high second stubble yields of cane obtained with each of these varieties are considered worthy of note. They may be found useful for midseason to late harvest under these conditions.

The following other varieties, included in plant cane tests only, displayed fairly satisfactory ripening qualities and gave very good yields of cane per acre: C.P. 34/120, 36/196, 36/197, 36/194, and 34/53. Of these C.P. 34/120, 34/53 and 36/194 could be readily harvested mechanically.

Discussion and Conclusion

Yields of cane per acre obtained in tests during the past 3 years with Co. 290 and C.P. 29/320, the two varieties most extensively cultivated in Louisiana, were considerably below levels maintained by these varieties during previous years. The decline has been especially noticeable in stubble crops. It

TABLE 7.—Results of first stubble variety tests on heavy soils in Louisiana during 1942.

Variety	Godchaux (Raceland) 11-2[1]	Oaklawn (Franklin) 11-12	Alma (Lakeland) 11-23	Station (Houma) 10-31	Average
Average yield of cane per acre (tons)					
Co. 290	33.7	17.3	21.8	17.1	22.47
C.P. 807	33.0	16.2	16.8	16.8	20.70
C.P. 28/11	25.9	15.5	21.7	17.2	20.07
C.P. 29/103	26.5	16.5	21.9	11.0	16.47
C.P. 29/116	35.0	16.3	27.0	17.8	24.02
C.P. 29/120	33.2	16.3	24.6	17.5	22.90
Difference					
For P.=.05	4.63	4.25	4.52	3.45	4.02
For P.=.01	6.40	5.89	6.26	4.70	5.56
Average indicated yield of 96° sugar per ton of cane (pounds)					
Co. 290	169.4	213.5	206.4	178.7	188.7
C.P. 807	163.1	196.7	200.9	155.6	175.8
C.P. 28/11	202.9	215.4	220.0	179.7	205.0
C.P. 29/103	167.4	217.6	239.2	199.6	201.6
C.P. 29/116	158.1	198.3	206.2	189.4	184.3
C.P. 29/120	192.4	231.8	240.1	209.1	225.5
Difference					
For P.=.05	15.65	12.25	12.85	9.73	15.80
For P.=.01	21.65	17.00	17.77	13.27	21.85
Average indicated yield of 96° sugar per acre (pounds)					
Co. 290	5,709	3,694	4,500	3,056	4,240
C.P. 807	5,382	3,187	3,375	2,614	3,639
C.P. 28/11	5,255	3,339	4,774	3,091	4,115
C.P. 29/103	4,436	1,414	5,238	2,196	3,321
C.P. 29/116	5,533	3,232	5,567	3,371	4,426
C.P. 29/120	6,734	3,778	6,483	3,659	5,163
Difference					
For P.=.05	445	481	522	408	491
For P.=.01	615	668	722	556	678

[1] Date of harvest.

TABLE 8.—Results of second stubble variety tests on heavy soils in Louisiana during 1942.

Variety	Alma (Lakeland) 10-19[1]
Average yield of cane per acre (tons)	
Co. 290	7.5
C.P. 807	2.7
C.P. 28/11	15.7
C.P. 29/103	14.9
C.P. 29/116	16.8
C.P. 29/120	13.7
Difference	
For P.=.05	3.70
For P.=.01	5.00
Average indicated yield of 96° sugar per ton of cane (pounds)	
Co. 290	173.7
C.P. 807	152.0
C.P. 28/11	158.5
C.P. 29/103	185.4
C.P. 29/116	158.5
C.P. 29/120	196.0
Difference	
For P.=.05	11.89
For P.=.01	16.08
Average indicated yield of 96° sugar per acre (pounds)	
Co. 290	1,303
C.P. 807	410
C.P. 28/11	2,488
C.P. 29/103	2,762
C.P. 29/116	2,663
C.P. 29/120	2,685
Difference	
For P.=.05	399
For P.=.01	540

[1] Date of Harvest.

should, of course, be recognized that these yield reductions, like reductions simultaneously observed with other varieties, were associated, in the main, with the unfavorable weather conditions prevailing during the period. It is possible that aggravated declines observed with Co. 290 and C.P. 29/320 may be due simply to relatively more severe damage currently suffered and that under more favorable conditions these varieties may return to their former levels of productivity. There is, however, some evidence indicating that observed recessions in yield may, in part at least, represent a definite reduction in yield capacity, possibly associated with a progressively severe encroachment of certain diseases on these particular varieties.[1] Results obtained so far with C.P. 34/120 indicate that this variety should be extensively substituted for C.P. 29/320 as soon as supplies of seed permit, and that C.P. 34/120 should also largely replace Co. 290 in parishes east of the Atchafalaya and to a lesser extent in other parts of the District. Minor substitution of C.P. 29/116 for Co. 290 in Iberia, St. Mary, St. Martin, and other western parishes can be readily justified as a measure of varietal diversification in precaution against possible stubble failure of an aggravated nature with Co. 290. C.P. 29/116 has not proved highly satisfactory for mechanical harvesting.

C.P. 29/120 has proved superior to C.P. 29/320, especially in stubble crops, and its immediate substitution for C.P. 29/320 may be found advisable pending the accumulation of sufficient seed supplies of C.P. 34/120. C.P. 29/120, while displaying poor stripping qualities because of tight "shucks", is well suited to mechanical harvesting.

The usefulness of C.P. 28/19, the most dependable early maturing variety now available, has been greatly lessened because of the present necessity of making extensive use of mechanical harvestors to adjust plantation operations to a greatly curtailed supply of labor. Because of its reclining habit of growth this variety cannot ordinarily be harvested by machine with any degree of success. Therefore, under present conditions, plantings of C.P. 28/19 should be limited to proportions necessary for early milling purposes. C.P. 34/120 may be found fairly satisfactory for early milling under growing conditions favoring early maturity, but this cannot be definitely established from information now available.

Co. 281, extensively grown during the past for windrowing purposes, is the weakest of the major varieties, and acreage devoted to this variety should be limited to minimum proportions consistent with reasonable safety. In view of results obtained in these and previous tests, the release of C.P. 32/206 as a substitute for Co. 281 in commercial culture should be considered. The extensive mosaic infection commonly found in Co. 281 not only renders a satisfactory control of this disease in the variety an almost hopeless task but greatly complicates the problem of controlling mosaic in other susceptible varieties.

In view of results during 1942 plantings of C.P. 29/103 should be extended with caution.

The poor stubbling qualities of C.P. 33/243 will greatly limit the variety's usefulness.

The continued satisfactory performance of C.P. 31/509, 33/372, and 33/409, especially in stubble crops, is considered worthy of note. However, it is doubtful that any of these can compete with C.P. 34/120 as long as C.P. 34/120 maintains levels of production displayed in tests conducted during recent years.

C.P. 34/1, 34/21, 34/92, 34/115, and 34/139 are some of the promising new varieties more recently tested on cooperating plantations.

[1] Arceneaux, G., and Hebert, L. P. A statistical analysis of varietal yields of sugarcane obtained over a period of years. Am. Soc. Agron. Jour. 35: 148-160. 1943.

TABLE 9.—Results of variety tests on muck soil at Clovelly Farms during 1942

Variety	Plant cane 12/7[1]			First stubble 11/5			Second stubble 10/15		
	Av. yield of cane per acre	Av. indicated yield of 96° sugar		Av. yield of cane per acre	Av. indicated yield of 96° sugar		Av. yield of cane per acre	Av. indicated yield of 96° sugar	
		Per ton of cane	Per acre		Per ton of cane	Per acre		Per ton of cane	Per acre
	Tons	Pounds	Pounds	Tons	Pounds	Pounds	Tons	Pounds	Pounds
Co. 281	28.1	169.8	4,771	23.6	149.3	3,523	24.5	115.7	2,835
C.P. 28/19	25.4	208.0	5,283	22.5	188.9	4,250	24.2	162.8	3,940
C.P. 29/320	24.0	174.4	4,186	29.7	156.8	4,657	23.6	153.3	3,618
C.P. 33/243	26.0	170.5	4,433	29.8	157.2	4,685	49.9	121.8	6,078
C.P. 33/253	27.1	178.9	4,848	28.7	151.3	4,342	42.9	126.2	5,414
C.P. 34/53	28.2	176.2	4,969						
C.P. 34/79				26.6	169.1	4,498			
C.P. 34/92	32.8	162.5	5,330						
C.P. 34/120	31.1	177.2	5,511						
C.P. 34/139	35.9	146.5	5,259						
C.P. 34,167	29.8	157.4	4,691						
C.P. 36/191	36.2	164.2	5,944						
C.P. 36/193	21.9	179.5	3,931						
C.P. 36/194	29.5	176.1	5,195						
C.P. 36/195	29.6	163.8	4,848						
C.P. 36/196	31.9	177.9	5,675						
C.P. 36/197	32.7	188.3	6,157						
Difference									
For P.=.05	4.01	13.58	469	3.68	7.51	408	2.41	18.56	453
For P.=.01	5.36	18.14	627	5.02	10.24	556	3.38	26.02	635

[1] Date of harvest.

CROPLAND—PROPORTIONATE SHARE—PLANTED ACRES OF LOUISIANA SUGARCANE FARMS PARTICIPATING IN THE SUGAR PROGRAM (SUGAR ACT OF 1937) BY PARISHES, FROM A. A. A. REPORTS

PARISHES	Cropland (Acres)				Proportionate Shares (Acres)				Total Planted (Acres)			
	1938	1939	1940	1941	1938	1939	1940	1941	1938	1939	1940	1941
Acadia	255.4				19.3				4.3			
Ascension	32,408.9	34,729.6	34,688.2	30,747.7	12,767.2	11,782.7	11,547.3	11,299.7	9,730.8	10,147.8	10,834.8	10,146.5
Assumption	45,460.0	47,213.6	46,413.0	43,796.1	23,893.9	22,788.4	17,557.5	21,639.2	23,802.6	23,837.4	22,482.6	22,501.3
Avoyelles	21,969.0	17,196.2	15,099.8	15,852.1	6,757.2	3,148.7	3,692.0	3,862.9	4,277.7	2,780.7	3,298.8	3,279.4
E. Baton Rouge	4,692.8	3,861.9	2,913.6	1,211.4	1,486.3	804.1	588.6	486.9	751.1	624.6	393.3	351.4
Evangeline	942.5	786.5	95.7	85.5	76.6	65.0	25.0	24.7	40.6	29.5	11.9	12.4
Iberia	84,616.2	84,587.3	84,663.9	83,773.6	35,908.0	29,606.7	30,277.7	31,621.5	35,429.4	31,116.9	31,148.2	31,683.7
Iberville	53,053.8	53,439.6	50,724.2	52,378.9	25,531.3	21,310.1	20,428.4	22,491.3	23,606.7	21,439.6	21,174.2	21,341.0
Jefferson		461.8	182.7			125.5	54.0			102.7	38.6	
Lafayette	63,305.8	62,228.9	52,236.5	44,114.7	21,927.1	16,701.9	13,693.9	14,360.8	15,074.7	13,521.0	11,559.0	11,073.4
Lafourche	55,172.0	52,527.1	52,912.4	68,355.5	24,328.7	18,848.5	19,199.7	20,535.6	22,995.5	18,662.0	19,634.3	19,825.0
Plaquemine	532.2	239.0			209.3	82.8			157.0	86.1		
Pointe Coupee	53,638.1	54,642.7	53,288.2	57,905.9	18,342.7	16,149.2	15,479.8	15,452.5	14,122.2	12,948.9	12,179.5	12,179.8
Rapides	16,574.4	19,936.3	16,643.6	18,451.2	4,692.4	2,903.0	2,564.2	2,853.3	2,492.6	2,507.5	2,225.3	2,276.8
St. Bernard												1,850.5
St. Charles	7,540.6	7,084.0	6,039.1	5,642.2	3,564.4	2,876.9	2,828.0	2,280.6	3,141.8	2,557.9	2,023.0	
St. James	32,879.2	33,293.0	32,467.1	32,222.6	13,786.4	11,578.7	11,595.7	11,922.5	13,315.8	11,398.1	11,542.6	11,832.3
St. John	29,192.4	28,090.0	28,036.5	27,498.9	14,596.3	12,405.2	11,744.0	13,023.8	14,254.3	12,520.6	13,138.8	13,328.4
St. Landry	20,218.0	20,137.0	18,536.5	12,743.0	3,183.5	2,884.8	2,914.3	2,402.0	2,521.7	2,218.5	2,258.4	1,759.3
St. Martin	63,524.6	64,619.1	68,732.2	58,171.5	23,514.3	21,784.9	20,375.8	20,899.6	17,655.6	17,497.9	15,310.4	16,358.3
St. Mary	58,140.9	57,756.8	57,029.2	55,970.4	28,766.3	24,473.9	22,486.9	25,512.8	28,217.8	26,541.0	25,918.1	25,898.5
Terrebonne	66,808.4	67,023.2	65,268.3	62,764.9	34,222.4	27,922.0	29,287.0	30,586.2	33,570.0	28,013.2	31,364.9	30,997.5
Vermilion	62,363.6	67,469.7	63,225.5	47,839.8	17,693.4	13,575.9	12,820.5	12,150.9	12,231.0	11,320.2	10,480.5	9,973.9
W. Baton Rouge	31,918.3	32,690.3	31,723.3	32,839.2	17,628.8	14,409.0	13,159.2	14,935.7	16,044.7	14,166.3	14,468.1	14,144.4
W. Feliciana	11,653.6	9,775.6	9,775.6	9,775.6	3,617.5	2,713.1	3,282.8	3,282.9	3,787.9	3,578.3	3,631.3	3,353.8
TOTAL	816,860.1	819,789.2	790,695.1	762,140.7	336,513.3	278,941.0	265,102.3	281,625.4	297,225.8	267,616.7	265,116.6	264,167.6

PROPORTIONATE SHARES ACRES HARVESTED FOR SUGAR—YIELD OF SUGARCANE PER ACRE AND YIELD OF RECOVERABLE SUGAR PER ACRE OF LOUISIANA FARMERS PARTICIPATING IN THE SUGAR PROGRAM (SUGAR ACT OF 1937) BY PARISHES FROM A. A. A. REPORTS

PARISHES	Proportionate Shares Harvested for Sugar (acres)				Yield of Cane per Acre Tons				Yield of Recoverable Sugar per Acre—CWT			
	1938	1939	1940	1941	1938	1939	1940	1941	1938	1939	1940	1941
Acadia	4.3				14.84				22.21			
Ascension	8,952.6	9,116.7	8,256.1	8,808.9	20.20	19.58	12.48	14.8	32.52	31.99	19.78	23.65
Assumption	21,583.5	19,856.7	14,388.2	19,140.9	24.35	24.92	17.13	19.5	40.74	42.69	28.50	32.37
Avoyelles	3,949.8	2,325.3	2,347.8	2,799.3	18.79	22.93	15.91	17.5	31.54	38.25	23.91	30.14
E. Baton Rouge	712.0	564.3	339.6	326.1	17.94	18.36	12.15	14.9	28.64	30.48	20.18	23.23
Evangeline	38.6	26.5	10.4	12.4	13.65	16.03	6.29	7.5	22.76	28.35	10.15	12.54
Iberia	31,635.7	25,748.1	23,982.3	25,995.9	19.72	22.06	13.21	15.5	34.18	37.15	21.55	25.83
Iberville	21,698.4	19,073.2	15,521.6	17,910.8	23.17	22.93	14.96	18.4	37.48	39.22	24.92	29.50
Jefferson		93.8	34.0			7.85	8.64			14.18	13.58	
Lafayette	13,535.8	12,399.1	8,427.5	9,022.2	15.90	16.79	10.54	14.4	27.15	28.06	18.24	23.76
Lafourche	21,196.9	17,292.5	16,064.0	17,653.7	24.91	23.38	15.49	20.2	41.86	39.97	25.29	33.34
Plaquemine	149.8	68.3			11.51	7.02			20.75	13.02		
Pointe Coupee	13,026.0	11,760.2	9,626.1	10,459.7	20.48	20.54	13.43	16.6	32.34	34.60	21.63	26.42
Rapides	2,307.1	2,320.0	1,646.8	1,910.8	20.04	21.15	16.98	19.3	33.22	35.13	26.76	31.57
St. Bernard												
St. Charles	3,004.2	2,343.9	1,613.1	1,616.4	17.64	15.67	11.85	15.8	28.60	26.48	18.88	25.79
St. James	12,125.2	10,302.5	9,777.7	10,338.7	21.23	21.25	12.61	15.3	35.10	36.49	20.54	25.54
St. John	13,168.1	10,984.1	9,734.3	11,311.5	23.29	22.73	13.98	17.5	39.72	40.66	23.15	29.61
St. Landry	2,155.7	1,984.9	1,372.7	1,494.2	20.84	19.21	12.18	17.8	32.62	31.41	19.38	28.04
St. Martin	15,848.6	15,658.1	11,899.5	13,676.6	19.99	18.29	13.02	15.8	33.27	29.99	21.33	25.56
St. Mary	26,062.9	22,178.7	18,536.7	21,917.4	22.46	18.97	14.89	19.0	38.92	39.25	23.81	31.64
Terrebonne	31,290.1	24,914.3	23,895.0	26,200.4	21.73	21.36	14.17	18.0	37.85	36.47	22.55	29.11
Vermilion	10,969.6	9,998.3	7,028.5	7,721.1	20.17	20.97	10.00	16.4	32.05	33.69	16.29	27.86
West Baton Rouge	14,867.4	12,685.8	10,487.8	12,428.0	21.54	20.96	14.11	17.4	34.87	36.07	23.39	28.86
West Feliciana	3,514.7	2,622.2	2,557.0	3,022.9	29.46	26.59	16.23	21.7	44.57	45.71	24.81	33.79
TOTAL	271,797.0	234,317.5	197,546.7	223,767.9	21.59	21.23	13.97	17.4	36.17	36.66	22.74	28.71

RECAPITULATION OF FINAL MANUFACTURING REPORTS OF LOUISIANA SUGAR MILLS (CROPS 1934-1942) A. A. A. Records

	1934	1935	1936	1937	1938	1939	1940	1941	1942
Crop Days	58.0	68.6	80.0	80.06	73.30	63.82	39.85	52.33	65.2
Time lost % of total time	16.49	15.89	18.61	20.81	13.43	13.00	15.91	19.63	19.49
Cane Tons Ground	3,163,901	4,182,715	4,941,235	5,240,675	5,858,871	5,083,657	2,923,204	3,946,699	4,734,321
% of Total Cane Ground	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tons Ground per Hour	38.83	42.17	51.98	50.75	53.38	56.10	54A25	55.83	55.27
Extraction N. J. % Cane	72.64	72.63	75.51	74.69	75.61	75.66	75.16	75.39	74.41
Sucrose Extraction	90.37	90.71	91.26	91.32	91.44	91.74	91.30	91.74	91.14
Saturation % Canc	18.26	16.39	14.77	14.479	16.10	15.78	15.00	15.66	17.71
Fibre % Cane	14.92	13.92	13.22	12.36	13.66	13.57	13.06	13.38	13.99
Java Ratio	75.39	77.54	78.63	77.51	78.71	78.23	78.19	78.14	77.63
Analyses									
Crusher Juice Brix	16.04	16.42	16.11	15.86	16.59	16.75	15.81	16.27	16.83
Brix Factor (Final Report)	97.05	97.08	92.27	97.47	97.35	97.25	97.22	97.30	97.21
Sucrose Factor (Final Report)	93.62	94.50	94.87	94.91	95.20	94.89	94.98	95.07	95.06
Normal Juice Brix	15.58	15.94	15.67	15.42	16.15	16.29	15.37	15.83	16.36
Normal Juice Sucrose	12.22	12.46	11.84	11.76	12.50	12.63	11.93	12.14	12.70
Normal Juice Purity	78.36	78.17	75.56	76.26	77.40	75.53	77.62	76.69	77.63
Factory Sirup Brix	57.06	57.56	59.23	58.33	58.88	59.24	58.52	58.68	57.91
Bagasse:—% Sucrose	3.17	3.07	3.09	2.92	3.06	3.04	3.07	2.93	3.07
Bagasse:—% Moisutre	48.53	47.95	47.97	48.38	47.69	47.69	48.94	48.64	49.00
Bagasse:—% Fiber	47.35	47.69	47.86	47.53	47.44	47.88	46.95	47.56	46.81
Press Cake, Sucrose	5.12	5.47	5.25	5.08	4.76	4.45	3.93	3.78	4.24
Residual Juice Brix		6.57	6.20	6.29	6.13	6.22	5.84	5.88	5.93
Sucrose Balance									
Sucrose in Molasses % Cane	0.920	0.864	0.930	1.004	1.022	0.964	0.969	0.961	0.945
Sucrose in Press Cake % Cane	0.090	0.082	0.096	0.111	0.097	0.082	0.082	0.078	0.081
Sucrose in Undetermined % Cane	0.150	0.135	0.201	0.201	0.220	0.179	0.141	0.183	0.198
Sucrose in Bagasse % Cane	0.950	0.944	0.858	0.848	0.994	0.860	0.854	0.824	0.919
Sucrose Total Losses % Cane	2.110	2.025	2.085	2.224	2.225	2.085	2.046	2.046	2.143
Sucrose Sugars % Cane	7.750	8.121	7.729	7.412	8.110	8.328	7.775	7.933	8.229
Total Sucrose % Cane	9.860	10.146	9.814	9.635	10.335	10.413	9.821	9.979	10.372
Average Rolls per Tandem	-----	8.82	9.13	10.78	10.01	10.12	10.24	10.51	10.50
Average Crushers per Tandem	-----	0.89	1.03	0.88	0.92	0.92	0.94	0.97	.97
Average Knives per Tandem	-----	0.89	0.90	0.99	0.95	0.92	0.96	1.04	1.04
Lbs. 96- Sugar M&E T/C	153.22	168.66	160.993	154.391	168.96	173.68	161.98	165.28	171.44
Gals. Final Molasses M&E T/C	5.6	5.94	6.520	6.57	6.48	6.64	6.28	6.69	6.59
Boiling House Efficiency	98.56	99.77	99.290	95.281	97.16	98.68	98.00	98.69	98.29

Costs of Operating Large Sugar Cane Farms and Sugar Mills in Louisiana 1937 to 1941

(By Roy A. Ballinger)

Studies of the costs incurred and the income received from the operation of large sugar cane farms and of sugar mills in Louisiana now cover the five-year period from 1937 to 1941. The record for this period is important, because it shows what has happened to the industry financially in the years just prior to the entrance of the United States into the present war. It provides a basis for estimating the requirements of the industry during the war, with respect to ceiling prices and other matters currently regulated by the government.

Farm Costs

The costs, per ton of cane sold, of operating large sugar cane farms during each of the five years from 1937 to 1941 are summarized in Table 1. The total costs during the period varied from $4.20 per ton of cane sold in 1939 to $5.73 in 1940. These figures cannot be taken as the actual cost of producing sugar cane. The farms produced small amounts of other crops and livestock which were sold. The cost of producing these commodities is included in the total costs shown in Table 1. If an allowance is made for these items the net cost of producing sugar cane varied from $3.70 per ton in 1939 to $5.21 in 1940.

During this period the most important factor responsible for the variation in costs has been changes in the yield of cane per acre. Costs were lowest in 1938 and 1939 when cane yields were highest, and highest in 1940 when cane yields were lowest. In 1937 and in 1941 both costs and yields were relatively close to the averages for the entire period.

TABLE 1.—Costs and Returns Per Ton of Cane Sold by Large Sugar Cane Farms in Louisiana, 1937 to 1941.

Items of cost and return	Per ton of cane sold				
	1937 ($)	1938 ($)	1939 ($)	1940 ($)	1941 ($)
Costs					
General overhead	2.12	1.68	1.61	2.48	1.96
Planting and cultivating	1.16	.96	.99	1.53	1.26
Harvesting cane	1.11	1.01	.90	.80	.75
Other crops	*	.18	.23	.30	.19
Interest	.48	.44	.47	.62	.58
Total	4.87	4.27	4.20	5.73	4.74
Miscellaneous credits	.46	.42	.50	.52	.63
Net cost	4.41	3.85	3.70	5.21	4.11
Income					
Cane sold	3.09	2.67	2.99	2.67	2.98
AAA payments	1.01	.88	.96	1.06	.74
Miscellaneous	.46	.43	.50	.52	.63
Total	4.56	3.98	4.45	4.25	4.35
Operating expenses	4.39	3.83	3.73	5.11	4.16
Net operating income	.17	.15	.72	—.86	.19
Net income	—.31	—.29	.25	—1.48	—.39
Capital investment	9.55	8.21	9.35	12.36	11.52
Yield per acre—ton	18.66	21.88	21.26	13.50	18.16

* Included in general overhead in 1937.

The total costs have been divided into five general categories. Approximately 40 per cent of the total costs have been classed as general overhead, 25 per cent as planting and cultivating, 20 per cent harvesting cane, 4 per cent other crops, and 11 per cent interest. In this classification general overhead includes more than is generally understood by that term. For instance all gasoline, oil and grease, and all machinery expenses were included in general overhead, although the materials were actually used in the various cultural and harvesting operations on the farms.

The most significant trend in any of the groups of costs is in the cost of harvesting cane. This declined from $1.11 per ton in 1937 to $.75 in 1941. This is a decline of 32 per cent. No doubt the increasing use of cane harvesters during this period accounts for most of this reduction. If new harvesters are available it is probable that additional reductions in cost and also saving in manpower can be made in 1943 and subsequent years.

The gross income per ton of cane of the large sugar cane farms varied from $4.56 in 1937 to $3.98 in 1938. The maximum variation in receipts was only $.58 per ton as compared with $1.53 for expenses. Variation in the price received for cane was the principal factor accounting for the fluctuations in gross income. All of the cane was sold under the terms of the standard cane purchase contract, which has not been changed during the period covered by the study. Under this contract the price of cane fluctuates directly with the price of raw sugar.

During the five-year period an average of 67 per cent of the gross income of the large farms came from the sale of sugar cane, 21 per cent from payments received from the United States Department of Agriculture, and 12 per cent from miscellaneous sources. Receipts from miscellaneous sources were unusually high in 1941, amounting to 14.5 per cent of the total.

The net operating income, which is the net income before making an allowance for interest on investment, varied from a gain of $.72 per tons of cane sold in 1939 to a loss of $.86 in 1940. The year to year variation, both in net operating income and in net income after subtracting interest, is directly affected by the yield per acre of cane However, the relationship was not as close as in the case of costs, since the gross income per ton of cane grown was not affected by cane yields.

Mill Costs

Table 2 gives a summary of the costs, per 100 pounds of sugar manufactured, of operating raw sugar mills in Louisiana, by years from 1937 to 1941. The total costs varied from $2.95 in 1939 to $3.91 in 1941. Net costs, however, after making an allowance for the value of molasses and miscellaneous products was highest in 1940 and lowest in 1939. These are the same years in which the large sugar cane farms experienced their lowest and highest costs. It is not likely that the yield of can per acre had any direct influence on mill costs as was the case with the large farms. However, the average number of tons of cane ground per mill did have a direct relationship to yearly variation in costs, as can be seen from the figures in Table 3. Farm yields per acre, of

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course, greatly influence the total tonnage of cane available for mills to grind.

TABLE 2.—Costs and Returns per 100 Pounds of Sugar made by Sugar Cane Mills in Louisiana, 1937 to 1941.

Items of cost and return	Average per 100 lbs. of sugar made				
	1937	1938	1939	1940	1941
Costs					
General overhead	.34	.26	.32	.49	.40
Procurement of cane	2.21	1.83	1.83	1.92	2.55
Manufacture of sugar	.60	.52	.52	.76	.67
Selling	.16	.15	.15	.11	.09
Interest	.17	.13	.13	.24	.20
Total	3.48	2.89	2.95	3.52	3.91
Miscellaneous credits	.31	.19	.26	.35	1.12
Net cost	3.17	2.70	2.69	3.17	2.79
Income					
Raw sugar	3.16	2.73	2.87	2.95	3.25
Miscellaneous	.31	.19	.26	.35	1.12
Total	3.47	2.92	3.13	3.30	4.37
Operating expenses	3.30	2.76	2.82	3.28	3.71
Net operating income	.16	.16	.31	.02	.66
Net income	—.01	.03	.18	—.22	.46
Capital investment	3.34	2.75	2.55	4.83	3.95

Another factor closely related to the costs per 100 pounds of sugar manufactured is the yield of sugar per ton of cane ground. This is expressed in Table 3 as pounds of sugar per ton of cane. This yield was lowest in 1937, but the number of tons of cane ground that year was fairly high so that costs were about average. A relatively low yield of sugar in 1940 was combined with a very low tonnage of cane to produce a very high cost. The unusually high cost in 1941 was the result of a higher price for sugar, which automatically increased the price paid for cane under the terms of the cane purchase contract used in Louisiana. Also the high yield of sugar obtained in 1941 indicates that the sucrose content of the cane was unusually high that year. This further increased the price paid for cane because of the premiums paid for the high sucrose.

The gross income of the sugar mills varied from $2.92 per 100 pounds of sugar in 1938 to $4.37 in 1941. Most of this variation was the result of changes in the price received for raw sugar, except in the year 1941. In 1941, molasses prices were unusually high. As a result the mills receipts from miscellaneous sources that year where $1.12 per 100 pounds of sugar manufactured as compared with an average of $.28 for the four previous years. An average of 87 per cent of the gross income of the mills came from the sale of sugar during the entire five-year period. Approximately half of the income from miscellaneous sources was obtained from the sale of molasses.

TABLE 3.—Average Volume of Cane Ground and Raw Sugar Manufactured by Louisiana Sugar Mills, 1937 to 1941.

Year	Number of Mills	Average per mill		
		Tons of cane ground*	Pounds of sugar manufactured†	Pounds of sugar per ton of cane
1937	30	75,561	11,693,449	154.8
1938	32	83,012	14,141,279	170.4
1939	42	74,028	12,792,355	172.8
1940	38	44,447	7,267,582	163.5
1941	37	54,947	10,052,981	183.0

* Actual or mill tons.
† 96° equivalent.

Under present circumstances the financial position of both the large sugar cane farms and the sugar mills is peculiarly dependent upon the actions of the United States government. Control over the price of sugar and molasses, over wage rates, and over the supply of machinery and equipment to be made available to the industry greatly limits the field of action which is open to an individual or company trying to operate at a profit.

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Costs and Returns for Producing Sugar Cane on Small "Family-Sized" Farms in 1941

(By J. Norman Efferson, Louisiana Agricultural Experiment Station)

Costs and returns on 179 family-sized sugar cane farms for the 1941 crop year were obtained in a survey by the Louisiana Agricultural Experiment Station during the spring of 1942. Each one of the farmers furnishing data was a small operator growing sugar cane for sale to sugar mills as his principal enterprise.

Average costs per acre and per ton for the sugar cane enterprise on these small farms in 1941 are shown in table 1. The expenses are grouped in two ways; the cost by year of growth or according to the element of time, and costs according to the type or kind of expense.

Cost By Year Of Growth

Corn and soybeans, or soybeans alone, were grown on all the land that was planted to sugar cane in the fall of 1940. Although most of the corn and a small part of the soybean hay was harvested for feed, this crop served primarily as a cover crop to bring the old cane stubble land back into condition before planting the new crop.

The cost of growing an acre of corn and soybeans was $21.90. The 24 bushels of corn harvested per acre, valued at $.65 per bushel or $1.16 per hundredweight of grain, was worth $15.60 per acre. The cost of the cover crop was considered to be the difference between the total cost for the year and the value of the feed harvested, or $6.30 per acre.

TABLE 1.—Cost of Producing Sugar Cane for Sugar on Small "Family-sized" Farms in Louisiana in 1941.

Cost by year of growth:	Cost per acre	Cost per ton
Net Cost of Corn and Soybeans in rotation	$6.30	$ .37
Planting an acre of cane	25.46	1.50
Total Cost per acre planted	31.76	1.87
Cover crop and planting per acre of cane harvested (one-half of above)	15.88	.93
Planted cane or stubble cane to cane ready to harvest	28.60	1.68
Harvesting and delivering to derrick or mill	20.35	1.20
Total Cost to Farmer of 17 Tons	64.83	3.81
Cost by Type of Expense:		
1.75 tons seed cane @ $3.88 per ton	6.79	.40
87.4 hours man labor (growing) @ $.15 per hour	13.11	.77
81.7 hours man labor (harvesting) @ $.20 per hour	16.34	.96
93.9 hours mule work @ $.13 per hour	12.21	.72
Use of equipment	6.30	.37
Cover Crop (one-half of $6.30)	3.15	.19
139 pounds fertilizer @ $40 per ton	2.78	.16
Interest @ 5% on land valued at $75	3.75	.22
Taxes	.40	.02
Total Cost to Farmer of 17 tons	64.83	3.81

Most of the growers followed the usual rotation of two years of cane and one year of corn and soybeans, and thus planted about one acre of sugar cane for each two acres harvested. Cane used for seed was valued at $13.58 per acre planted and represented more than half of the cost of planting. The total cost per planted acre, including the $6.30 cost of growing the soybean cover crop, was $31.76.

Costs for caring for the cane crop throughout the growing season, including man labor, horse or mule work, fertilizer, and equipment use, averaged $28.60 per acre. The farmers surveyed made average yields of 17 tons per acre in 1941 and harvested this cane and delivered it to the derrick at a cost of $20.35 per acre or $1.20 per ton of cane harvested. Total costs amounted to $65 per acre of cane harvested or $3.81 per ton.

Costs By Type Of Expense

The most important item of expense in the production of sugar cane on these farms in 1941 was man labor. Total labor costs averaged $30 per acre of cane harvested or $1.73 per ton. Approximately 87 hours of man labor (at a cost of 15 cents per hour) was required per acre for all growing operations and 82 hours (at a cost of 20 cents per hour) to harvest and acre with an average of 17 tons per acre. Other important items of cost were seed cane, horse and mule work, fertilizer, use of equipment, and costs for cover crops.

Gross and Net Returns

Total returns from the sugar cane enterprise amounted to $83 per acre. These returns included $3.66 per ton received for sugar cane, $.27 per ton molasses payment, and $.97 per ton Agricultural Adjustment Administration Benefit payment (table 2).

TABLE 2.—Income From Sugar Cane for Sugar on Small "Family-sized" Farms in Louisiana in 1941.

	Income per acre	Income per ton
Paid by mill for cane at derrick:		
Based on price of sugar	$62.22	$3.66
Based on price of molasses	4.59	.27
Total at derrick	$66.81	3.93
A. A. A. Benefit Payment	16.49	.97
Total income to farmer for cane	83.30	4.90
Total Costs	64.83	3.81
Net Returns	18.47	1.09

Returns above all costs, or net profit, averaged $18.47 per acre or $1.09 per ton of cane harvested. Since the total amount of man labor spent on the enterprise averaged 169 hours, the average return per hour of labor was $.28. This means that if a cane grower and the members of his family did all the work on the enterprise, and if his costs and returns were the same as the average of those studied in 1941, he would have received an average payment of $.28 per hour for all work on the crop.

Net returns from the sugar cane enterprise were higher in 1941 than for any other year in which records have been obtained from small "family-sized" sugar cane farms (table 3). In 1938, these same growers had a net loss, after deducting all expenses, including labor, from the total returns of $.62 per ton and in 1940, a net loss of about $2.50 per ton. Returns were higher in 1941 than in former years because of an increase in the total returns from cane, or an increase in price, of more than $1.00 a ton, a slight reduction in cost per acre due to more efficient management, and weather conditions which resulted in the production of average yields per acre instead of yields much below average such as were obtained in 1940.

TABLE 3.—Costs and Returns from Sugar Cane for Sugar on Small "Family-Sized" Farms in Louisiana in 1938, 1940 and 1941.

	1938	1940	1941
Number of Farms	500	453	179
Acres per Farm	150	135	140
Acres in Cane	41	35	44
Tons of Cane per acre	22.2	14.5	17.0
Costs and Returns Per Ton:			
Price received per ton	2 72	2.74	3.93
A. A. A. Benefit Payments	.95	.96	.97
Total returns per ton	3.67	3.70	4.90
Total Cost per ton	4.29	6.27	3.81
Profit or loss per ton	—.62	—2.57	+1.09

Disease Testing and Initial Seedling Selection Work at the Houma Station During 1942

By Eaton M. Summers, Associate Pathologist, and E. V. Abbott, Pathologist, Division Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture

This paper is another in a series, the object of which is to keep the Louisiana sugarcane growers informed on the production, disease testing, and early selection of new seedlings. A change in the system of assigning C.P. numbers is announced and a detailed chart presented to show the testing procedure involved in the seedling selection work.

Commercial Varieties

The disease situation in the commercial varieties is essentially as reported in 1942.[1] Chlorotic streak has become more prevalent in some areas, with infection ranging from 15 to 40 percent in fields of stubble of C.P. 29/120 and C.P. 29/320. In such instances, the necessity for a control program is plainly indicated. Roguing seed cane plots has become established as a practical method of keeping the disease in check, and was taken up by additional growers during the year. Chlorotic streak is more damaging to infected plants than is mosaic, although it spreads less rapidly, and can be more readily controlled by roguing.

Mosaic is of little importance except in Co. 281 and Co. 290. Control by roguing is possible in Co. 281 and is quite easy in Co. 290. The acreage planted to Co. 281 is decreasing steadily each year in most areas because of its low-yielding capacity, particularly when mosaic infection is high. It is possible that it will be almost entirely eliminated soon since, in addition to the recently released C.P. 34/120, there are several promising varieties with good windrowing qualities now in advanced stages of testing.[2] Co. 290, however, continues to be the leading variety in the Western Parishes and is an important variety in the Southeastern Parishes as well. It is replacing some acreage of C.P. 29/116 which had been increased after the poor stands of Co. 290 that occured in 1940 as the result of an unseasonably severe winter. Careful attention to roguing will insure a healthy seed supply of this variety.

The Release of C.P. 34/120

C.P. 34/120 was released in the fall of 1942 for general planting. This variety is probably the best "all-purpose" cane yet released in the State. It combines apparent adaptation to all soil types in the sugar district, fairly early maturity, excellent tonnage, windrowing qualities between those of Co. 281 and Co. 290, and commercial resistance to the principal diseases occurring in Louisiana, with the possible exception of chlorotic streak. Its susceptibility to this disease is comparable with that of C.P. 29/320, which means that roguing of seed plots is indicated for all areas where this disease occurs. Severe pokkah boeng and red stripe injury noted on small plantings of this variety in 1942 appeared to be the result of over-fertilization, and there seems to be no cause for apprehension concerning these diseases,

[1] Abbott, E. V., and Summers, Eaton M. Disease testing and initial seedling selection work at the Houma Station during 1940 and 1941. Sugar Bulletin 20 (18): 137-141, June 15, 1942.

[2] Lauritzen, J. I. Testing varieties of sugarcane for resistance to inversion of sucrose and for windrowing qualities in Louisiana. Sugar Bulletin 20 (24): 210-215, September 15, 1942.

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which thus far have never been considered serious on any variety in Louisiana. Because of its wide adaptability and many good qualities, extensive planting of C.P. 34/120 seems assured.

Disease Reaction of Unreleased Varieties at the Test Fields

Fairly complete disease records of the advanced test field varieties were included in the 1942 reports and will not be repeated. Continued rapid spread of mosaic in C.P. 34/54 and C.P. 34/75 is a serious objection to their further increase or consideration for commercial utilization. It seems unwise to advocate the release of any variety that is as susceptible to mosaic as they are. Approximate control of this disease appears to be a distinct possibility as a result of the rapid elimination of Co. 281 and widespread roguing in Co. 290. Extensive planting of other susceptible varieties, therefore, would only add to the problem. They would have to be rogued and in addition would serve as reservoirs of infection for spread to other varieties.

C.P. 36/62 appears to be so susceptible to chlorotic streak that its commercial cultivation would be a distinct hazard even if it had no other weakness. This high-sucrose variety, however, is a comparatively low tonnage cane, particularly in stubble crops.

C.P. 36/191 apparently suffered severely from pokkah boeng during the early summer but, characteristically, the symptoms later disappeared and the stalks made a normal growth. This disease was much worse than usual in 1942. C.P. 36/191 has been rather favorably regarded by many growers because of its unusually long and heavy stalks, which cut 9 to 10 feet and weight 3 to 4 pounds each. Its chief weakness is a tendency toward thin stands.

Mosaic infection was recorded for the first time in 1942 on the following varieties: C.P. 31/529, 34/1, 34/53, 34/80, 34/86, 34/92, 34/115, and 36/191. Infection was observed on one or more stalks of each variety.

Recent Test Field Introductions

The following 12 varieties were introduced at the test fields in 1942: C.P. 34/151, 36/50, 36/80, 36/111, 36/161, 36/183, 36/187 (Clovelly only), 37/8 (Clovelly only), 37/9, 38/18, and 33/425 (Alma only). Of these, only C.P. 38/18 has shown any mosaic infection at Houma, a trace of a severe type that does not appear to spread very rapidly. C.P. 34/151, 36/80, and 36/111 have been rated as susceptible to red rot, the others as commercially resistant. C.P. 36/161, 36/183, and 36/187 have been rated as very susceptible to root rot, the others as resistant.

Total Seedlings Tested and New C.P. Numbers Assigned

The total number of seedlings under test by the pathologists at Houma during 1942 is shown in table 1. A comparison with the grand totals for the 2 preceding years shows the expansion that has taken place in this phase of the work in recent years. The total number examined in 1942 is by far the largest ever handled at Houma in one year, and probably represents the maximum with present facilities and personnel. In fact, the total number of seedlings tested will have to be reduced, i.e. the number of "single stool" seedlings, because those in the "C.P. candidate" stage require considerably more individual attention. The latter involve from 5 to 8 examinations or operations and the former only 1 to 3, and those in less detail.

The number of C.P. numbers assigned in 1942 was only 26. The small number was a result of the relatively poor quality of the seedlings resulting from the 1939 breeding season, which should have furnished the majority of the C.P. numbers in 1942, but actually furnished only one. In spite of the small number of seedlings in this group there are several that appear to be good enough to attract favorable attention during agronomic testing.

TABLE 1.—Summary of seedlings tested and C. P. numbers assigned in 1942, including a comparison with the grand totals for 1940 and 1941, at the U. S. Sugar Plant Field Station, Houma, Louisiana.

Classification of Seedlings	Number examined in the field	Number analyzed for sucrose	Number tested for red rot	Number inoculated with mosaic	C.P. Numbers assigned
Data for 1942:					
C.P. candidates	3,311	1,379	858	628	25
Single stool progenies of commercial crosses	29,639	3,938	----	15,121	----
Turkestan hybrids:					
1st nobilization crosses	880	9	----	----	----
2nd nobilization crosses	519	181	----	----	1
3rd nobilization crosses	1,029	244	13	38	----
Florida Station seedlings	2	2	----	----	----
Foreign and parent varieties	72	8	33	47	1[1]
Grand Total in 1942	35,452	5,761	904	15,834	27[2]
Grand Total in 1941	20,782	4,210	399	23,904	65
Grand Total in 1940	6,522	986	412	1,096	34

[1] A variety from Tucuman, Argentina.
[2] Includes Tucuman variety mentioned above.

C.P. '42 series numbers were given to all seedlings, regardless of the year of origin, that received C.P. numbers in 1942. This means there will be no C.P. 39, 40, or 41 numbers. From now on the C.P. numbers will indicate the end of the preliminary pathological testing and the beginning of agronomic testing rather than the breeding season during which the "true seed" was produced at Canal Point, Florida.

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TABLE 2. PROCEDURE IN PRELIMINARY DISEASE TESTING AND SELECTION OF SUGARCANE SEEDLINGS BY THE PATHOLOGISTS AT THE UNITED STATES SUGAR PLANT FIELD STATION, HOUMA, LA.

The assignment of C. P. numbers after 3 or 4 years of testing and observation for resistance to diseases is based also on desirable type and indicated tonnage and sugar content. Varieties at this stage are ready for intensive agronomic testing by Federal and State agronomists. Pathological studies will oe continued, of course, as long as the variety is grown.

1940	1941								1942						
Nov., 1940 to Jan., 1941	Jan.	Feb.	March to June			July	November		July	Sept.	October		November		
									Plant cane in plots:						
Crosses made at Canal Point, Florida	Seed sent to Houma	Seed germinated in greenhouse	Seedlings potted	Inoculated with mosaic	To field, mosaic discarded	Disease notes	Brix (Refractometer) determinations	Replant 8-foot plots	Disease notes	Field selections 800 (Est.)	Red rot inoculations 800 (Est.)	Red rot readings	Sucrose samples, 10 stalks 800 (Est.)	Selections for increase	Replant, 12-foot plots 500 (Est.)
			25,000	22,000	17,500 single stools		3,200	1,600							
									Stubbles of original stools						
									Disease notes	Field selections 5,000 (Est.)	Sucrose samples 5 stalks 5,000 (Est.)	Replant 8-foot plots 1,500 (Est.)			

1943							1944 and 1945	
July	Sept.	October				November		
Disease notes (Plant cane and stubble)	Field selections (Plant cane and stubble)	Sucrose samples, 10 stalks (Stubble) 700 (Est.)	Assign C.P. Nos. (Plant cane) 100 (Est.)	Cut & treat Hot water (Plant cane and stubble)	Divide 3 ways: 1. Houma, La. 2. Baton Rouge, La. 3. Cairo, Ga. Canal Point, Fla. Meridian, Miss.	Sucrose samples 10 stalks (Plant cane)	A few more C.P. Nos.	Total C.P. numbers probably about 1% of original 25,000
Discard original stools		Repeat plant cane procedure for 1942					Assign C.P. Nos. as in 1943 100 (Est.)	

This change should greatly simplify the task of keeping records as all seedlings being tested as a unit after having been given C.P. numbers will have similar designations.

Procedure Followed in Seedling Testing

The procedure followed in the production and testing of new sugarcane seedlings has been the subject of many questions by cane growers, investigators, and other interested parties. Accordingly a chart (table 2) was prepared by the senior author and presented at a meeting of the Contact Committee of the American Sugar Cane League held at Houma in May 1942. Several requests that the chart be made available were received. It is, therefore, included in this paper.

The various steps are given in order, with the approximate time and number of seedlings involved in each operation. The first C.P. numbers from the crosses made in 1940 will be assigned in 1943. Additional numbers will be assigned in 1944 and 1945 with the possibility of a very few holdovers for another year or two. It is anticipated that less than 1 percent of the total, or not more than 250 seedlings, will prove good enough to be assigned C.P. numbers.

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Raw Sugar 96°	244,208	257,710	291,313	396,955	356,166	177,021	252,176	305,802
Clarified Raw Value	15,284	18,254	18,172	11,161	8,423	1,294	2,731	4,233
Turbinados	13,757	12,661	21,367	27,022	23,345	16,673	25,425	25,889
Granulated	57,037	82,236	55,235	47,590	45,145	37,464	31,991	51,182
Washed Raws	3,809	2,782	3,094	122	939	1,236	7,776	8,694
String—Others	6,797	9,870	10,934	5,781	2,844	1,407	2,144	2,529
Sirup—Gallons	1,902,955	2,078,011	1,454,108	1,531,000	1,824,127	1,567,318	1,705,220	1,802,624
1st Molasses	2,463,309	2,461,463	1,809,692	2,256,616	1,896,291	1,224,042	2,142,987	3,301,640
2nd Molasses	2,227,996	2,491,480	2,052,608	1,720,463	3,214,954	1,481,536	2,734,639	4,420,460
Blackstrap	20,818,081	27,712,266	29,902,333	34,379,122	27,891,109	15,384,342	21,560,072	23,103,373
Total Sugars	340,892	383,513	400,115	488,631	436,862	239,095	322,243	398,330
Tons of Cane Ground	4,179,645	4,942,525	5,295,268	5,909,846	5,128,321	2,978,516	4,021,903	4,791,134

Determination of Wage Rates for Mainland Sugar Area in 1943

CHAPTER VIII—WAR FOOD ADMINISTRATION
PART 802—SUGAR DETERMINATIONS

Pursuant to section 301 (b) of the Sugar Act of 1937, as amended, and Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

802,241 *Fair and reasonable wage rates for persons employed in the production and cultivation of sugarcane in the mainland cane sugar area during the calendar year 1943.* The requirements of section 301 (b) of the Sugar Act of 1937, as amended, shall be deemed to have been met with respect to the production and cultivation of sugarcane in the mainland cane sugar area during the period from January 1, 1943 to December 31, 1943, if all persons employed on the farm during that period in the production and cultivation of sugarcane shall have been paid in full for all such work and shall have been paid wages in cash therefor at rates not less than the following:

(a) *On A Time Basis*

Class of work	Louisiana: Per day of 9 hours	Louisiana: For a working day longer or shorter than 9 hours; rate per hour	Florida: Per day of 9 hours	Florida: For a working day longer or shorter than 9 hours; rate per hour
		cents		cents
(1) For all work except as specified under (2):				
Adult males	$1.75	20.0	$2.30	26.0
Adult females	1.50	17.0	1.95	22.0
(2) Specialized operations:				
Tractor drivers	2.15	24.0	2.65	30.0
Teamsters	1.75	20.0	----	----
	Per day of 8 hours	For a working day shorter than 8 hours: rate per hour	Per day of 8 hours	For a working day shorter than 8 hours: rate per hour
		cents		cents
(3) Children between 14 and 16 years (maximum employment for such children is 8 hours per day)	$1.30	17.0	$1.75	22.0

(b) *On A Piece-Rate Basis*

(1) For all classes of work	If work is performed on any piece-rate basis the earnings per hour or per day shall be not less than the applicable rates per hour or per day specified above for adult male or adult female workers, or children between the ages of 14 and 16 years.

(c) *Provided, however:*

(1) That for work performed in the production and cultivation of sugarcane between January 1, 1943 and the date of issuance of this determination, payment in full of the rates determined for similar work for the calendar year 1942 (S.D. No. 124, issued February 16, 1942) or the rates agreed upon between the producer and the laborer, whichever was higher, will constitute compliance with the requirements of section 301 (b) of the said Act with respect to such work;

(2) That if the producer and the laborer agree upon a wage rate for any class of work higher than that prescribed herein, payment in full of the amount agreed upon must be made to qualify the producer for payment;

(3) That the producer shall furnish to the laborer, without charge, the customary perquisites, such as a habitable house, a suitable garden plot with facilities for its cultivation, pasturage for livestock, medical attention, and similar incidentals; and

(4) That the producer shall not, through any subterfuge or device whatsoever, reduce the wage rates to laborers below those determined above.

Done at Washington, D. C., this 29th day of May 1943.

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War Food Administrator.

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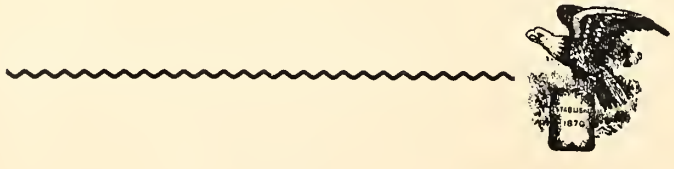

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THE SUGAR BULLETIN

Entered as second-class matter April 13, 1925, at the post office at New Orleans, La., under Act of March 6, 1879.

We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., JULY 1, 1943 No. 19

Release of New Sugar Cane Varieties

In accordance with established procedure, the three cooperating agencies which are working together in the development of improved sugarcane varieties for Louisiana, viz., the Division of Sugar Plant Investigations of the Bureau of Plant Industry, Soils, and Agricultural Engineering, United States Department of Agriculture, the Louisiana State Agricultural Experiment Station and the American Sugar Cane League of the U.S.A., Inc., have jointly approved the release of C.P. 33-310 and C.P. 33-425 for commercial planting in the fall of 1943.

It should be pointed out that the release of these two varieties for commercial culture is not to be taken as an endorsement for general utilization. Evidence so far available indicates that these varieties will be found adapted to relatively limited areas and commercial plantings are not recommended except in areas mentioned below.

C.P. 33-310 has shown promise on terrace soils of **Lafayette and adjoining Parishes** where its utilization in partial substitution for Co. 290 and C.P. 29-116 may prove advantageous. In several tests it has surpassed Co. 290 in yield of cane per acre and has demonstrated a distinct advantage over Co. 290 in point of maturity. It is susceptible to red rot and chlorotic streak, moderately susceptible to root rot and resistant to mosaic. It has a relatively small diameter but makes an erect growth and should prove adaptable to mechanical harvesting. It is not recommended for windrowing purposes.

C.P. 33-425 compares favorably with C.P. 28-19 and C.P. 29-320 in earliness and sucrose content. **However, it cannot be recommended for commercial culture except under the most favorable soil conditions.** Results of field tests so far available indicate that a partial replacement of C.P. 29-320 and C.P. 28-19 with C.P. 33-425 in the **Red River section and on the better drained soils of the upper Mississippi section** may be found advantageous. It may also prove suitable for culture on **reclaimed muck areas of Lafourche Parish.** It is moderately susceptible to red rot and resistant to mosaic. It has a relatively small barrel but makes an erect growth and should prove adaptable to mechanical harvesting. It is not recommended for windrowing purposes.

APPROVED (Signed) E. W. Brandes, *U. S. Dept. of Agriculture*
" W. G. Taggart; *La. State Experiment Station*
" W. C. Kemper, *American Sugar Cane League*

THE
SUGAR BULLETIN
414 Whitney Bldg., New Orleans 12
Marcel J. Voorhies, Editor
Issued on the 1st and 15th of each month. Official Organ of the American Sugar Cane League of the U. S. A.
in which are consolidated
The Louisiana Sugar Planters' Assn.
The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
Subscription Price, 50 Cents per Year.

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Sugar Cane Variety Report by the Contact Committee of American Sugar Cane League

A sub-committee of the Contact Committee of the American Sugar Cane League met at the Houma U. S. D. A. Station on June 14 to make recommendations to the main committee regarding what disposition should be made of the unreleased sugarcane varieties now at the secondary increase stations, and any others that might be considered for release this year. The following recommendations were agreed on:

C.P. 31-509	No increase this year
C.P. 32-206	No increase this year
C.P. 33-372	No increase this year
C.P. 33-409	No increase this year
C.P. 34-21	No increase this year
C.P. 34-53	No increase this year
C.P. 36-55	No increase this year
C.P. 36-191	No increase this year

It was the opinion of those present that at least three of the above varieties should be definitely eliminated from further consideration:

C.P. 32-206, because its place will be taken by C.P. 34-120; C.P. 34-21, because of the difficulty in harvesting due to lodging; and C.P. 36-55, because of its very rapid deterioration following cutting.

C.P. 34-53 in all probability should also be dropped because it appears to have no advantage over C.P. 34-120.

It was agreed to recommend the increase of the following varieties:

C.P. 34-92	To approximately 5 acres
C.P. 34-139	To approximately 5 acres
C.P. 34-115	To approximately 3 acres
C.P. 36-105	To approximately 5 acres

The sub-committee recommended the release of C.P. 33-310, of which there are approximately 47 acres and C.P. 33-425, of which there are approximately 16 acres. It was pointed out that if they are released, it should be with the recommendation that C.P. 33-310 is particularly adapted to the Western section of the sugar district, and C.P. 33-425 is particularly adapted to the Northern section around Bunkie and Meeker, and that their cultivation on a commercial scale should probably be confined to those areas. A majority of the sub-committee felt that both varieties should be released this year, 1943.

The above sub-committee was composed of:

Dr. E. W. Brandes, U. S. Department of Agriculture.

Dr. George Arceneaux, U. S. Department of Agriculture.

Dr. E. M. Summers, U. S. Department of Agriculture.

Dr. E. V. Abbott, U. S. Department of Agriculture.

Mr. Davidson, U. S. Department of Agriculture.

Mr. Hebert, U. S. Department of Agriculture.

Dr. I. L. Forbes, Louisiana State Experiment Station

Mr. C. B. Gouaux, Louisiana State Experiment Station

Mr. Elliott Jones, American Sugar Cane League

Mr. J. J. Shaffer, Jr., American Sugar Cane League

Testimony of Mr. Frank L. Barker, Chairman of Labor Committee

Presented at 1943 Harvesting Wage Hearing held at Baton Rouge, Louisiana on June 22, 1943

My name is Frank Barker, of Lockport, Louisiana. I am associated with Valentine Sugars, a processor of sugar cane and am also a grower of sugar cane, operating in the Louisiana sugar cane producing area.

I make this appearance as Chairman of the Labor Committee of the American Sugar Cane League, an organization composed of approximately 11,000 Louisiana growers and all of the Louisiana processors.

In view of the fact that it appears at this time that there will be no increase in the ceiling price of sugar and molasses, and, consequently, no increase in the price to be received by the cane grower for his 1943 crop of sugar cane, we are of the opinion that no increase in the harvesting wage over that contained in the 1942 determination is justified.

The rates contained in the 1942 wage determination were undoubtedly predicated on the maximum amount the cane grower could pay harvesting labor, considering his anticipated return from the 1942 crop. The price to be received for the 1943 crop of sugar cane is identical with the price received for the 1942 crop and, therefore, the growers' return cannot exceed that of 1942.

NOTICE!

The American Sugar Cane League has been directed by the U. S. Department of Agriculture and the Louisiana Experiment Station to undertake a fair and impartial distribution of the newly released varieties of canes known as

C.P. 33-310
and
C.P. 33-425

A number of small plots of these canes are subject to this distribution. They have been grown with the understanding that those growing them shall be paid for them at the price of mill cane plus $1.50 per ton for cutting them and loading them on the vehicle of the purchaser and the League is authorized by the U. S. Department of Agriculture and the Louisiana Experiment Station to charge a distribution fee of 85 cents a ton.*

If you wish some of these canes please fill out and sign the application blank on the reverse hereon. NO OTHER FORM OF APPLICATION WILL BE ACCEPTED, AND IT MUST BE RECEIVED AT THE OFFICE OF THE AMERICAN SUGAR CANE LEAGUE, 414 WHITNEY BUILDING, NEW ORLEANS, NOT LATER THAN SEPTEMBER 4th, 1943.

In the absence at this time, of exact figures supplied by the Government on the amount of the benefit payment for 1943 the precise price of mill cane is not known. You are therefore required to agree to pay the best approximation we can now make, $5.44 per ton or actual mill price plus benefit payments.

Deposit of $1.00 per ton must be made with application

Remember—

The last day on which applications will be received is September 4th, 1943.

*This is to cover the cost of distribution, which involves clerical, stenographic, and administrative work, printing, postage and a very heavy responsibility. It is likewise a partial reimbursement to the League for various extraordinary expenses incurred in bringing about the acquisition of new canes and the preliminary experimentation therewith before release. The League has been designated by the U. S. Department of Agriculture and the Louisiana Experiment Station to make the distribution simply because they believe it will carry out the task more efficiently, and certainly more cheaply, than any other agency.

The American Sugar Cane League
414 Whitney Bank Bldg.
New Orleans 12, La.

.....1943

I hereby apply for:

.....tons of C. P. 33-310 seed cane.

.....tons of C. P. 33-425 seed cane.

I understand the cane will cost me a total of approximately $7.79 (Seven Dollars and Seventy-Nine Cents) a ton plus the average cost of inspection and hot-water treatment if necessary, and I agree to said cost.

Mill price per ton at $3.73 sugar.....	$3.83
Conditional payment at 80¢ a cwt.....	1.28
Value of molasses at 18¢.....	.33
Cost of cutting and loading.....	1.50
(This sum all goes to the grower of the cane)..	$6.94
Distribution charge (Goes to the American Sugar Cane League).....	.85
Total:.....	$7.79

The average cost of inspection and treatment, if necessary, and any additional payments to grower, to be added to the $7.79 per ton, the final cost to be determined when order is confirmed immediately prior to delivery.

I enclose $.....which is a deposit of earnest money at the rate of $1.00 per ton, non-refundable (unless the cane is not tendered me). The remainder I will pay when the cane is ready to be delivered to me, and I am to be notified concerning this and supplied with the name and address of the grower from whom I am to procure the cane, which I will send for not later than November 2d, 1943. Should the cane fail to be tendered to me by that date all payments and deposits made by me are to be refunded in full on each ton not tendered.

I had.....acres of Sugarcane in 1942-43.

This application is made with the full understanding on my part that it may not be possible to tender me as much cane as I apply for, owing to the limited supply.

Name.....

Address.....

TEAR ON THIS PERFORATED LINE

Statement of Mr. W. F. Giles, Chairman of the Louisiana Grower-Processor Committee, Relative to Fair Price Determination

My name is W. F. Giles, of Adeline, Louisiana. I am a grower of sugar cane operating in the mainland cane sugar area.

I make this appearance as chairman and spokesman of the Louisiana Grower-Processor Committee, a committee composed of seven Louisiana growers and seven Louisiana processors, who were originally selected at statewide meetings of these two branches of the Louisiana Sugar Industry. I am a grower member of that committee.

As has been pointed out at hearings conducted in previous years, it is the purpose of this committee to achieve and maintain a fair and equitable relationship between the Louisiana growers and processors in the purchase of sugar cane. Having no official status it can only serve the growers and processors of Louisiana through cooperation with and by recommendations to the proper agency of the Federal Government.

The Grower-Processor Committee, at a meeting held on June 3, 1943, at Thibodaux, Louisiana, carefully considered the relationship between the Louisiana grower and the Louisiana processor in the purchase of the 1943 crop of sugar cane. The determination of fair and reasonable prices for the 1942 crop of Louisiana sugar cane was reviewed, and after a full discussion the following resolution was unanimously adopted:

"WHEREAS the Louisiana Grower-Processor Committee believes that no formal change should be made in the contractual relationship between the Louisiana producers and processors of sugar cane as to the sale and purchase of the 1943 crop of sugar cane, and that no mandatory changes under the Fair Price Determination of the Secretary of Agriculture are advisable, but recognizes that the excessive trash content of sugar cane is becoming a major problem in a portion of the Louisiana sugar cane producing area, which problem requires serious consideration and action in some cases, and,

WHEREAS in connection with the purchase of the 1942 crop of sugar cane the United States Department of Agriculture, through representatives of its Baton Rouge, Louisiana office, acknowledged that individual producers and processors could mutually agree on deductions for excessive trash, after the method of trash computation was approved and supervised by said representatives, and

WHEREAS it is deemed advisable that such experimental work through mutual agreement be continued, but with the official acquiescence and recognition of the Secretary of Agriculture, and with certain restrictions thereon,

THEREFORE, BE IT RESOLVED that the Grower-Processor Committee of Louisiana do hereby recommend, that a clause be inserted in the Fair Price Determination of the Secretary of Agriculture for the 1943 crop of sugar cane, to the effect that a producer and a processor may mutually agree that if the sugar cane delivered by such producer contains shucks and trash in excess of a reasonable quantity, the processor shall have the right, subject to the approval and supervision of the Secretary of Agriculture or his authorized agent, as to the method of shucks and trash computation, to deduct from the weight of the sugar cane delivered by such producer, the weight of the excess shucks and trash; provided the weight of shucks and trash allowable, for which no deduction shall be made, shall not be less than 4% of the total weight of the deliveries made by such producer; and provided further that any processor making such deductions shall be obligated to make similar deductions from sugar cane produced and delivered by such processor. That said clause herein recommended should further provide that nothing therein contained shall be construed to effect any processor's existing right to reject sugar cane which is not reasonably free from shucks and trash.

BE IT FURTHER RESOLVED that the chairman of this committee, or someone to be designated by him, be and he is hereby authorized and directed to formally present this recommendation to representatives of the Secretary of Agriculture at the public hearing to be held in Louisiana in connection with the fair and reasonable prices to be paid for the 1943 crop of Louisiana sugar cane."

Therefore, in pursuance with the authority and direction contained in said resolution, it is here recommended that the determination of fair and reasonable prices for the 1943 crop of Louisiana sugar cane for sugar pursuant to the Sugar Act of 1937, as amended, be similar to the determination relative to the 1942 crop, except that there be added thereto and included therein a clause reading substantially as follows:

"A processor and a producer may mutually agree that if the sugar cane delivered by such producer contains shucks and trash in excess of a reasonable quantity, the processor shall have the right, subject to the approval and supervision of the Secretary of Agriculture or his authorized agent as to the method of shucks and trash computation, to deduct from the weight of the sugar cane delivered by such producer, the weight of the excess shucks and trash; provided the weight of shucks and trash allowable, for which no deduction shall be made, shall not be less than 4% of the total weight of the deliveries made by such producer; and provided further that any processor making such deductions shall be obligated to make similar deductions from sugar cane produced and delivered by such processor. Nothing contained in this provision shall be construed to affect the existing right of any processor to reject sugar cane which is not reasonably free from shucks and trash."

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A Dinner at Houma

Under a provision in its Charter authorizing it to elect Honorary Life Members of the American Sugar Cane League, the Executive Committee of the League has, at various intervals, conferred this honor on seven individuals, Mr. Jules Godchaux, Dr. E. W. Brandes, Mr. David W. Pipes, Mr. C. D. Kemper, Mr. W. G. Taggart, Mr. B. C. Thomson, and Mr. Reginald Dykers.

On the evening of June 16th, 1943, the Executive Committee gave a dinner party, the cost of which was defrayed by the participants, at the Houma High School Building in Terrebonne Parish, for the purpose of conferring on all seven of the Life Members engraved certificates reading as follows:

We stand for the encouragement of Home Industries as against Foreign Competition

Because of distinguished services rendered by him to the Cane Sugar Industry of the United States

A LIFE MEMBERSHIP
in the
AMERICAN SUGAR CANE LEAGUE
OF THE U.S.A., Inc.
has been conferred on

(Name)

by unanimous vote of the
Executive Committee of the organization

(Date)

(Signed) Frank L. Barker, Treasurer (Signed) W. C. Kemper, President

In addition to the certificate each Life Member was awarded a gold symbol to be worn on his watch chain, but actual delivery of these was deferred because of inability of the manufacturing jeweler to complete them on time.

The attendance at the dinner was approximately 175, composed of cane growers, factory owners, factory technicians and members of the scientific contingent, both State and Federal, who have contributed so enormously toward the success—or we might more properly say the survival—of the Louisiana sugar industry since it bowed its head so low under the shock of the mosaic disease of sugarcane in the 1920's.

The orator of the evening was Senator Edward J. Gay, of Plaquemine, a past President of the League, and on him devolved the duty of presenting the certificates. To each recipient in turn Senator Gay addressed himself, reciting the reasons why the certificate of Life Membership was being awarded and as in a total membership of over 10,000 only seven such awards have been made in the 21 years the League has existed, it follows that the Senator was able to recite some notably outstanding and brilliant achievements. He did this with the eloquence for which he is conspicuous.

The whole occasion was very delightful. The menu of the dinner was perfect, with just a little whiff of demon rum to put a buoyant foundation under the turkey. The male entertainment Committee was composed of Mr. D. W. Pipes, Chairman, Mr. J. J. Shaffer, Jr., and Mr. J. J. Munson, but the crowd voted unanimously that it was the gracious attentions of Mrs. D. W. Pipes, Mrs. J. J. Munson, Mrs. Lee Shaffer, Mrs. William McCollam, Mrs. Andrew McCollam, Mrs. William White, Mrs. A. J. Isacks, and Mrs. H. C. Kellis, who comprised the ladies entertainment Committee, that made the party the splendid success that it was. These charming ladies were everywhere at once to see that no one failed to have a good time. The use of the High School Building was tendered by the Superintendent of the Terrebonne Parish School Board, Mr. H. L. Bourgeois.

Proportionate Shares for Farms in Mainland Cane Sugar Area for 1943 Crop and Tenant and Sharecropper Protection

CHAPTER VIII—WAR FOOD ADMINISTRATION
PART 802—SUGAR DETERMINATIONS

Pursuant to the provisions of section 301 (c) and 302 of the Sugar Act of 1937, as amended, by Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

802.26e. *Proportionate shares of sugarcane for the mainland cane sugar area for the 1943 crop and tenant and sharecroppers protection.*—(a) *Farm proportionate share.* The proportionate share of sugarcane for the 1943 crop for any farm in the mainland cane sugar area shall be the number of acres planted thereon for the production of sugarcane to be marketed (or processed by the producer) for the extraction of sugar or liquid sugar during the 1943 crop season.

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(b) *Tenant and sharecropper protection.* Notwithstanding the establishment of a proportionate share for any farm under paragraph (a) above, eligibility of any producer on the farm for payment shall be subject to the following conditions:

(1) That such producer shall not have entered into any leasing or cropping agreement for the purpose of diverting to himself or other producers any payment to which tenants or sharecroppers would be entitled if their 1942 leasing or cropping agreements were in effect.

(2) That such producer shall not have interfered with any contracts heretofore entered into by tenants or sharecroppers for the sale of their sugarcane or their share of the sugarcane produced on the farm.

Done at Washington, D.C. this 21st day of June, 1943.

CHESTER C. DAVIS,
War Food Administrator.

L. S. U. Offers Short Course for Bench Chemists

Registration for a short course for bench chemists will take place on Monday July 5, 1943, at 10:00 A.M. in the General Extension Office, of Louisiana State University, which is located in the David F. Boyd Memorial Building. Last day for registration will be Wednesday, July 7, 1943.

The course will be completed on Friday afternoon, July 30, 1943. There will be no class work on Saturday and Sunday during the course.

The purpose of this course will be to train personnel for service as routine analysts in Louisiana sugar factories. Students who have had previous experience and show sufficient aptitude will be given training in the preparation of routine factory reports.

The course is open to both men and women. Applicants should have at least high school education or its equivalent.

The cost of the course will be approximately fifty dollars for men and sixty dollars for women. A tentative budget is submitted for the guidance of applicants.

Estimated Expenditures

	Men	*Women*
Registration Fee	$10.00	$10.00
Room rent, 4 weeks	7.00	12.00
Board	25.00	27.00
Laundry	5.00	7.00
Incidentals	5.00	5.00
	$52.00	$61.00

Students will be housed in the University dormitories, can purchase their meals in the University dining halls and will be allowed to send their clothes to the Student Laundry. Funds for students can be deposited with the University Business Office subject to withdrawal as needed. It is strongly recommended that this be done.

The student should bring to the University in addition to clothes and toilet articles, sufficient bed linens and towels plus a pillow. Beds are single. A bathing suit will be useful since the swimming pool will be open to the group.

Classes will meet in the Chemical Engineering Building and the Audubon Sugar Factory. They will be held daily with instruction in the morning and laboratory work in the afternoons.

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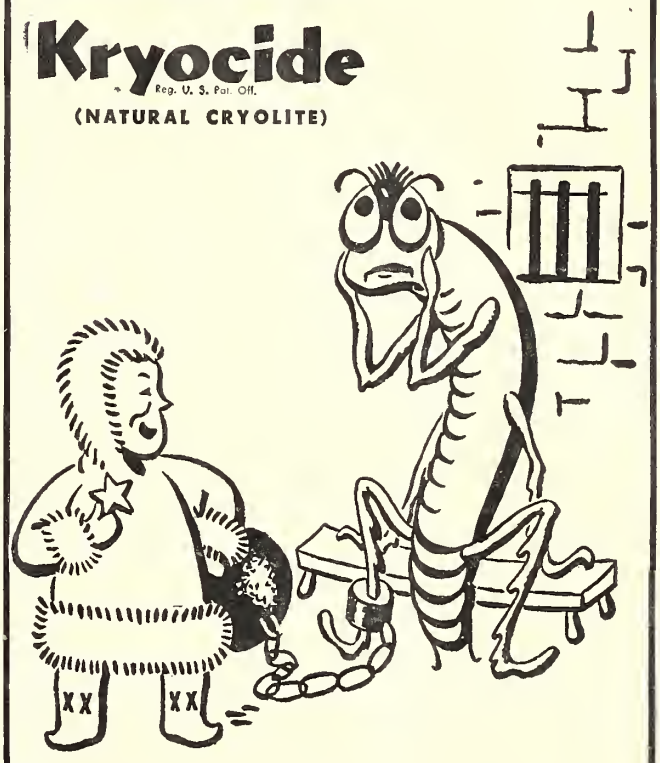

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THE SUGAR BULLETIN

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Semi-Annual Progress Report

(*By C. J. Bourg*)

At the beginning of the year, the American Sugar Cane League announced a Seven-Point Program for 1943. It is with some satisfaction that we make a semi-annual report of progress in regard to this program. The American Sugar Cane League had announced full cooperation with the U. S. Government in the food production program as a means of facilitating the participation of sugarcane growers and processors in the war effort.

1. *Fertilizer* was the subject of one of the seven objectives. The League had begun negotiations with the WPB during the summer months of 1942 and had received assurances, although reminded of the shortages in the supplies of sodium nitrate within the United States and the scarcity of ships to bring in imports from Chile. In January and February the fertilizer supplies which had been made available were disappointing as to volume, but by keeping the War Food Administration and the Nitrogen Unit of WPB constantly advised of the needs of the Louisiana growers and their concern about the lateness of deliveries, there was finally made available a sufficient tonnage of cyanamid, sodium nitrate and ammonium sulphate to fill the basic requirements of the industry. It was the suggestion of the League that cyanamid could be brought from Canada without affecting the railroad facilities. The ODT having objected to the use of railway rolling stock to haul cyanamid, the alternative was proposed that the barge lines on the Mississippi River be used. After some delay 8,000 tons of cyanamid were delivered and finally an additional 6,000 tons came down the Mississippi River for use on the sugarcane farms in south Louisiana.

Already the League has entered negotiations to obtain fertilizer supplies for the 1944 crop. The Nitrogen Unit of WPB has announced a program whereby farmers are expected to accept deliveries of fertilizer from month to month in order that a well coordinated program may be carried out. The League is seeking to make arrangements for the early delivery of fertilizers, in some instances even before the New Year. Presently, orders are being taken for cyanamid based upon previous purchases of this fertilizer by cane growers during the 1940-1941 season and last year, whichever is higher. By this means sugarcane growers should be able to obtain a minimum of 15,000 tons, provided they accept delivery of one third of the order in 1943 and the balance early in 1944, preferably in monthly installments. The League is continuing its efforts to obtain sodium nitrate with some assurances that ammonium nitrate will be available eventually.

2. *Farm machinery* has received a generous increase in the allocation of scarce materials by WPB. As far as the League is informed, based upon appeals submitted, the cane growers have been able to obtain the farm implements and repair parts needed this year. Dusting machines allocated to the State of Louisiana included machines for use in the sugarcane Parishes where the cane borer infestation had created situations which demanded relief. The need for dusting machines in the cotton areas had been given first consideration by Washington but upon the presentation of the facts, in which the scientists of the Federal Station at Houma and the State Station at Baton Rouge cooperated, a fair share was

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SUGAR BULLETIN

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Marcel J. Voorhies, Editor

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in which are consolidated
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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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made available in the sugarcane area. Of chief concern was the allotment of scarce materials for cane harvesters. There were many conferences held in this regard and Mr. J. J. Shaffer, Jr., Vice President of the American Sugar Cane League, made several trips to Washington, as a result of which the allotments were increased sufficiently to pretty well take care of the ability of each manufacturer of harvesting machinery to produce in accordance with his ability and available material or equipment. In consequence, the industry faces the 1943 harvest with a prospect of having in operation approximately 200 mechanical harvesters, which is at least a partial insurance against the labor shortage which threatens the possibility of saving the entire crop of growing sugarcane.

3. *Bags* for marketing the raw sugar crop in 1942 became a serious problem because Louisiana was deprived of its normal use of second-hand bags from Cuba, due to a provision in the contract under which the Cuban crop of sugar was purchased, whereby the Cubans reserve the right to have all second-hand bags returned to them. With the assistance of friendly WPB officials, this matter was worked out in 1942. Based on this experience, an early start was made to obtain the bags needed to market the 1943 raw sugar crop. Again the Louisiana sugar industry has received very fine cooperation from officials in WPB and WFA, so that indications are a sufficient number of bags will be obtainable, provided that all raw sugar producers take the precaution of making purchases or arrangements well in advance.

4. *Prompt and timely action by Government agencies* has been sought by growers and processors because too many regulations and determinations were being issued so late as to disrupt the industry and to bring about a retroactive effect. The recent hearings on labor rates and the far price under the sugarcane purchase contract were held in June, which will give a better opportunity to announce determinations in advance of the beginning of the grinding season. Now that experiences under war conditions have extended for almost two years, we are finding that fewer changes are being made in regulations and retroactive action has been almost entirely eliminated. The establishment of a War Food Administration has brought about many improvements and WFA will probably operate more smoothly from now on.

5. *Questionnaires from Government agencies* had reached the point where there was an enormous waste of time and manpower. This situation was the subject of universal complaints so that finally Congressional action was demanded and the National Administration issued orders for the reduction of questionnaires, applications and other forms to the absolute minimum. The report is that thousands of forms have been discontinued under the requirements that each had to receive the approval of the Bureau of Budget. As protests on this score have diminished, it is evident that some relief has been afforded to the harassed businessman and farmer.

6. *A labor shortage* exists in all industries and in all agricultural regions. The conditions of war make it impossible to provide a completely satisfactory answer for every employer of men. Of all of the problems with which Washington has wrestled, none has been more difficult and remains unsolved to as great an extent as manpower. The deferments under the Selective Service have been greatly clarified, although the discretion given to local boards still brings about different results in different localities. The Office of Labor in WFA has taken over the job of recruiting agricultural labor from the War Manpower Commission and the U. S. Employment Service. At the present time, the American Sugar Cane League is negotiating for insurance of some kind that the greatest number of workers will be made available for the harvesting operations in the sugarcane fields and factories of Louisiana. The Office of Labor is operating in the field through the Extension Service in each state and we have direct evidence of the cooperation being provided through the County Agents looking to plans for the recruitment of harvesting labor. Conferences were held with representatives of the U. S. Department of Agriculture at the time of their presence in Louisiana for the hearings in June, and before the planting of sugarcane begins next month, it is the purpose of the League to obtain from the WFA a program of insurance that all of the growing sugarcane may be harvested in 1943, which insurance would be extended to the planting, cultivation and harvest of the 1944 crop. It is too early to report any details pending further negotiations in Washington and in Louisiana.

7. *Parity prices* for farm products still remains a declared policy of Congress. Under war conditions parity is not an effective means of securing desired production of farm products. In the case of sugarcane, we now find ourselves in the distressful and unjustifiable position of no assurance that sugarcane

growers will receive more than 88% of parity for sugarcane. The League is exerting its greatest efforts to find a cure for this situation. Growers of sugar beets were bound to be unwilling to plant beets this spring unless given some supplemental payment and a program was adopted which provided a payment of $1.50 per ton of sugar beets, in addition to the price received from the factory and the conditional payment made under the Sugar Act. The effect of this program has been announced by WFA to be that sugar beet growers are receiving 125% of parity on their 1943 crop. The disparity between 88% for sugarcane and 125% for sugar beets it too great to remain unchanged, in view of the policy of Congress under the Sugar Act, which provides for uniformity of treatment. As stated above under number 6, the American Sugar Cane League is working towards the adoption of a sugarcane program which will increase the prospective returns for sugarcane by such an amount as will make it possible to hire sufficient labor to save the whole crop and to prevent losses in money and in sugarcane by the growers.

We gratefully acknowledge the assistance and support we have received towards the achievement of our program from our Senators and Congressmen who compose the Louisiana delegation.

The completion of the Seven Point Program for 1943 continues to be the main objective of the American Sugar Cane League.

Dr. Brandes Explains the Sorgo Situation

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF PLANT INDUSTRY
Soils, and Agricultural Engineering
Division of
SUGAR PLANT INVESTIGATIONS

May 31, 1943

Mr. Wallace C. Kemper, President
American Sugar Cane League
Franklin, Louisiana

Dear Mr. Kemper:

The present status and the potentialities of sorgo as a commercial source of sugar has been under consideration for some time by research agencies, including the Division of Sugar Plant Investigations. In current discussions on the subject with representatives of the Government, farmers, and sugar processors, it becomes plain that a statement of the historical background and the reasons for review of sorgo sugar possibilities may help to clarify some of the underlying conceptions.

It has been demonstrated that fabrication of sugar from sorgo is practicable. Recent contributions to the technique of sugar sorgo processing by technicians of the Bureau of Agricultural Chemistry and Engineering have shown that salable by-products, including starch and aconitic acid offset the increased cost compared with the cost of processing sugarcane. Thus the raw material, sorgo cane, may be handled economically in the factory.

Production of the raw material in the field, however, presents certain unsolved problems, chiefly the rather unsatisfactory yields of sorgo per acre. Obviously, the development of efficient methods of processing leads nowhere if the raw material is too expensive.

The chance of correcting this difficulty by breeding higher yielding types, using varieties procurable in equatorial Africa, seems very promising. These higher yielding types are the tall-growing tropical varieties with thick, heavy stalks, known to exist in some parts of Africa near the equator. A few of them had been imported into the United States, even in the last century, but, unlike the imported temperate-zone varieties, they did not make seed and quickly became extinct here. The reason is that they are "short-day" forms that mature and produce seed heads only where the daily duration of daylight is less than in the case of our long summer days. The short-day characteristic is not now an insurmountable obstacle to utilizing the tropical forms. We can import the needed varieties and establish them at our new cooperative breeding stations in this hemisphere where the relative lengths of day and night are what the varieties are accustomed to. By using air transport of pollen from station to station it will then be possible to cross them with our present varieties and secure improved intermediate forms that will head. In recent years the same device has been resorted to in crossing temperate zone and tropical varieties of sugarcane in our program of cane variety improvement.

Now that conditions are under better control in Africa the opportunity is presented to collect the varieties needed for the sorgo breeding program. They are found in small patches or "dooryard" plantings of native villages. In contrast with the grain sorghums, seed is not obtainable in trading centers or markets. The seed collecting must be done with discrimination by an experienced sorgo expert armed with simple testing equipment including a hand refractometer. He could carry the small packets of seed in personal baggage even with the limitations imposed by air travel.

In some quarters fear has been voiced that development of sugar sorgo may invite more competition in an already highly competitive industry. It may not be out of place to emphasize that the greatest usefulness of sugar sorgo will be to provide an early season added crop and extend the duration of the harvesting and grinding campaign in existing sugar factories, thus improving their competitive position. The idea that sorgo sugar can be made profitably right on the farm like sirup has little to back it up. Unfortunately that idea has become entrenched in some quarters, but it is an unwarranted conception. Sorgo sirup commands a premium price which people are willing to pay because of flavor. The skillful sirup maker on the farm gets a premium far beyond the market price of the sugar in his sirup. He avoids the cost of refining and is paid as much for "impurities" as for the sugar. The farmer would be bankrupt in mind as well as purse if he deliberately spent money to remove the intangible values represented by impurities in his sirup. The most conspicuous example of the value of flavor is maple sirup. Sugar production has long been a highly technical industry and most experienced observers are not impressed with the possibility of small farm fabrication of sugar from sorgo any more than beets or sugarcane. The technical skills and equipment required are too formidable.

During the past two seasons a selected group of sorgo varieties have been grown as indicator plantings in the vicinities of cane mills and sugar beet factories throughout the country. These preliminary

experiments were conducted as feelers to gain some experience in handling the crop in new localities and to make observations on relative growth, sugar percentage, and purity in different areas. The selected varieties which somewhat prematurely have come to be known as sugar sorgos are simply the most promising high sugar sirup varieties. In general the indications are that they, and varieties derived from them when crossed with the high tonnage varieties from Africa, will be better adapted to the lower elevations and lower latitudes of the United States, including the Gulf states and parts of California where cane mills and beet factories are now located. In other parts of the country the results reported by our agronomists are not as promising.

The enclosed introduction to a memorandum of instruction sent to agronomists of the Division of Sugar Plant Investigations on December 6, 1941, will indicate to you something of the development of our projections on sugar sorgo before Pearl Harbor. The basic principles remain the same and I hope that progress in reviewing the practicability of sugar sorgo as an accessory crop, advantageous to producer and consumer alike, may now be accelerated.

Sincerely yours,

E. W. BRANDES
Head Pathologist in Charge

Enclosure

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF PLANT INDUSTRY
Division of
SUGAR PLANT INVESTIGATIONS

Bureau of Plant Industry Station
Beltsville, Maryland
Dec. 6, 1941

To: All Field Stations, Division of Sugar Plant Investigations
From: E. W. Brandes, Head Pathologist-in-charge
Subject: Sugar Sorgo As an Accessory, Early Crop for Existing Sugar Beet and Sugarcane Factories

The farmers of the United States have recently been asked by the Secretary of Agriculture to produce more sugar to meet some expected unusual demand due to the impact of war, chiefly, I suppose, on transportation facilities. Whatever may be the cause, it is expected that the American sugar industry will stand ready to meet the request of the Secretary when specific details are forthcoming.

It appears that we must help to provide the realistic view of this new complex of questions and problems, and if there is any lesson from the past, our chief concern must be to provide the cushion against losses when demands recede. It would be unwise to assume that any part of the increase will be permanent, but the chances for increased participation in the home market can be furthered by attention to the possibility of economies. Other sugar industries that normally supply a part of the American market will be encouraged to produce more sugar to meet the expected temporary deficiencies elsewhere. If, in contrast to the others, our own increases can be on a basis of lesser instead of greater costs of production, the advantage when curtailment of production comes, is obvious.

Compared with turning it off, turning on the flow of sugar is a relatively simple painless matter, depending on how much, and whether new factories and other equipment are needed. A small increase could be readily accomplished. A large increase involving priorities control of machinery and building construction materials obviously would be difficult now and unless we are blind to the teachings of the past 20 years, painful readjustment may be expected later. Lunging into capital outlays may again prove to be improvident of the future.

We should take a forward look, at least several years, and explore the possibilities of less painful and more flexible expansion based on permanent economies. Among the projects that need not call for large capital outlay and may be integrated with present sugarcane or sugar beet operations is utilization of sugar sorgo. The same factories could be used in off-seasons without much interference or disruption of present routine. Probably such increased utilization of capital equipment constitutes the most direct and feasible method of reducing production costs. A re-examination of sugar sorgo is justified because of recent improvements in the sugar extraction process and potential improvements in the sorgo plant itself, which by the plan suggested offer genuine prospects for eventually reducing the cost of a pound of sugar. At present this is an assumption, but it is based on theoretical considerations that seem valid.

Limited, emergency use of available sorgo varieties for sugar as an exploratory venture and the ultimate development of sugar sorgo as an economic plant poses the problem in two aspects, the immediate and the future; it must be admitted that both are experimental. In normal circumstances (peace time) a premature use of sorgo for sugar, before the development of varieties improved in yield and quality would be the best way to court disaster and give the idea a black eye, even though trials were on a limited scale. The risk of inadequate yields, the hazard of diseases and the chance of sugar extraction difficulties would warn against introducing sorgo as an adjunct crop until proved varieties could be released. In the present circumstances, recognizing the gamble involved it may be permitted to start trial plantings at all factories as soon as the necessary seed can be procured. With appropriate disclaimers of "great expectations" such a program would have the merit of gaining for sugar farmers some familiarity with the crop and its problems in anticipation of the development of suitable varieties by breeding, the ultimate goal of the research program. It is possible that new sugar sorgo, answering the challenge to produce lower cost sugar, may be forthcoming in a few years. Nothing in this program should preclude or discourage meeting the Secretary's appeal in the orthodox manner. The sugar sorgo program does not interfere with expansion of the ordinary beet and cane operations.

For the past ten years attention has been given by the Division to the possibility of utilizing sorgo as an accessory sugar source in the present sugar-producing parts of the United States where the season of harvesting sorgo would not overlap the sugarcane and sugar beet harvesting campaigns. In the estimate for appropriations submitted in 1933 an increase was requested for the purpose of exploring this possibility. The advantages would include economies that come with extended annual use of all fabrication equipment, better distribution of labor loads, and other obvious advantages. The problems involved, so far as they could be foreseen, were given full recognition in the argument justifying the request. It was assumed that the limited number of sorgo varieties

available in the United States had been sufficiently tested to indicate the nature of some of the problems and the job was conceived to be chiefly an attempt to improve certain characteristics of the sorgo plant by breeding. Because sorgo is not indigenous in the United States, it was also assumed that selective gathering of varieties in the centers of origin in Africa would be likely to advance the solution of problems. Starch and a high percent of reducing sugar in the juice of available varieties constituted a major problem. Another problem was the generally unsatisfactory yields, 9 to 11 tons instead of the 15 to 20 tons believed to be necessary for profitable operation in most areas. The year 1933 marked the beginning of a period of retrenchment in government expenditure for many activities and while the argument for sugar sorgo was considered valid by several of the constituted authorities who must pass on new projects, approval of the item was not given. Since 1933, except in years when notice was given that no requests for increases would be entertained, the item has been unweariedly resubmitted and just as persistently rejected until this year, when funds were appropriated for investigation of sugar sorgo on a modest scale. This brief recital of history is given to indicate that the proposed work is not a new conception, but a gradual recasting of an old idea.

The idea that sugar might be made profitably from sorgo in the United States is nearly a hundred years old, and is attributable to an English planter, Leonard Wray, whose practical experience with sugarcane in the West Indies, India, Straits Settlements and finally Natal, evidently directed his thinking on the complex questions involved in the adaptation of sugar plants to new environments. All of the early introductions of sorgo into the United States and practically all work on the plant up to that of Harvey Wiley, 1887-1892, was aimed at utilizing sorgo for sugar productions. The great value of the crop for forage came to be realized with the transition of the semi-arid western plains into farms supporting livestock and the creation of a need for drought resisting feed crops for cattle. The need was met by splendid plant adaptation and plant improvement research to which many men in the U. S. Department of Agriculture have contributed. Sorgo is now used only for forage and for manufacture of sirup.

Several considerations based on developments since the turn of the century indicate that the proposed new work on sugar sorgo stands a much better chance of success than any previous attempt. The whole idea of systematic breeding toward definite objectives, with parent material that offers the chance of manipulation by adding or subtracting existing characters, has matured since the time of the last attempt to utilize sorgo for sugar. The limitations as well as the opportunities for recombining characters are now better understood. The possibilities that lie in better planned tapping of the world's resources of sorgo and related plant material, at the presumptive centers of origin of the cultivated forms, and the secondary centers so far as they are known, and appraisal of the opportunities for useful fresh collections in these centers, is on a better basis. The appraisals can be made in the light of a somewhat more inclusive, or global, rather than provincial considerations of physical geography in relation to resetlement of cultivated plants. It must be admitted that in respect to the latter considerations, owing to insufficient data on climate and other factors in the centers of origin of sorgo, only broad assumption can be made to permit more discriminating choice of areas in which to seek forms suited to our needs. Enough is known, however, to explain why sorgo has not become an important economic plant in Europe for sugar production, or even for forage, except in parts of the Mediterranean region where the latitudes overlap those of the centers of origin of sorgo. Most of Europe is far above the latitudes of the centers of origin and conditions are too unnatural for sorgo. Enough is known to encourage the idea that natural conditions for sorgo are much more appropriate in the United States than in Europe, and even offer the chance of adapting to our conditions hybrids with some portion of tropical or sub-tropical strains.

The interruption of efforts in this country for nearly fifty years may be charged to the previous abortive attempts and the feeling that they had exhausted all avenues of approach and had settled the question. Natural barriers of latitude and climate appear to explain the failure to develop sorgo as a source of sugar in Europe but in parts of the world more favorable for development of specialized forms for that purpose the same stagnation of effort is apparent. The lack of modern technique in plant breeding or the lack of an incentive may explain the failure in other countries, including those where the plant is indigenous. As mentioned in the introductory paragraph we in America have a double incentive, the ever-present demand for economies to maintain our competitive status and the current exhortations to farmers to produce more sugar.

It is unfortunate that the sugar sorgo project was not started 10 years ago when it was first proposed. The world was at peace and in collecting the full range of sorgo forms deemed necessary no more than the ordinary difficulties of travel would have been encountered in the best hunting grounds, the primitive parts of equatorial Africa. It is questionable whether the Department of Agriculture and the Department of State would agree or governments of the countries involved would permit at this time collecting expeditions in the African areas most important, the Guinea coast, and southern Abyssinia. Areas of lesser importance may be accessible. It is possible that cooperative analytical work on local varieties as a preliminary to collecting may be arranged in South Africa. Meantime, all promising previous introductions into the United States are being assembled at Meridian, Mississippi, for starch, reducing sugar, sucrose and other analyses, and selections from these will be sent to practically all Sugar Plant Field Stations next year and in succeeding years.

Meridian, Mississippi, has been selected as the primary center for breeding because an experience of several years indicated normal sexual development for the greatest number of (available) parent varieties at that place, but certain crosses may need to be made elsewhere and the pollen of tropical varieties may need to be shipped to temperate zone stations or vice versa. In the past, imported varieties, perhaps important in breeding, were lost through failure to set seed in the United States. Some Abyssinian varieties most promising for the needed "cane weight" in breeding operations were lost in that manner. With our series of sugarcane breeding stations in the Western Hemisphere, including our cooperative stations in South America and the Canal Zone, extending from 3° 50′ North to 45° North, easily ac-

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cessible by airplane for transport of pollen we now have a great advantage. Without doubt, we can accomplish the desired cross breeding, and chances are good that the resulting new varieties will have the essential qualities of earliness, high tonnage, and high percentage of sugar. The project must be carefully planned and executed. The objectives are commendable and the technique is scientifically sound.

Western Club Meets

A meeting of the Louisiana Sugar Producers' Club (Western Division) was called to order by President R. O. Young at 12:30 P. M. on July 2nd in New Iberia. The President expressed his appreciation for the sustained large attendance representing every section of the area covered by the Club.

Present were:

R. O. Young, Youngsville Factory
W. C. Kemper, Sterling & Shadyside Factories
Geo. L. Billeaud, Billeaud Factory
Murphy Foster, Maryland Factory
Harry Trowbridge, Alice C. Factory
W. Prescott Foster, Alice C. Factory
M. L. Marquette, Oaklawn Factory
Serge Golodetz, Orange Grove Factory
John M. Caffery, Columbia Factory
C. B. Caldwell, Erath, La.
F. M. Burleigh, Duhe & Bourgeois Factory
Alphonse Labiche, Ruth Factory
Earl Chauffe, Ruth Factory
Frank M. Bacque, Youngsville Factory
M. V. Yarbrough, Youngsville Factory
Robert J. Gauthier, Levert-St. John Factory
F. J. Dansereau, Jr., 823 Perdido St., N.O., La.
Harry L. Henslee, Youngsville Factory
F. G. Blumenthal, Jr., Vida Sugar Factory
J. W. Doll, Loisel Factory
R. E. Flournoy, Orange Grove Factory
E. F. Kramer, Meeker Factory
Robert H. Littell, Billeaud Factory
Jules M. Burguieres, Cypremont Factory
James J. Ozenne, Breaux Bridge Factory
S. G. Todd, Franklin, La.
J. M. Delcambre, Breaux Bridge, La.
Hugh Junca, Franklin, La.
Louis M. Billeaud, Broussard, La.
Walter Melancon, Broussard, La.
Ulysse Landry, P.O. Box 44, New Iberia, La.
Lionel Kling, New Iberia, La.
W. F. Giles, Adeline, La.
Stanely Angelle, County Agent, St. Martin Parish
R. J. Badeaux, Jr., County Agent, St. Martin Parish
P. J. DeGravelles, County Agent, St. Mary Parish
E. C. Simon, L.S.U., La. Sugar Experiment Station, Baton Rouge, La.
C. B. Gouaux, L.S.U., La. Sugar Experiment Station Baton Rouge, La.
Wm. J. Pyburn, War Manpower Commission, Baton Rouge, La.
S. Pailet, War Manpower Commission, 127 Elks Place, N.O., La.
J. E. Minvielle, U.S. Employment Service, 10 Bridge St., New Iberia, La.
Marcel J. Voorhies, 414 Whitney Bldg., N.O., La.

Moved, seconded and unanimously approved that the minutes of the last meeting be adopted as mailed to the membership.

Mr. E. C. Simon described the development of new seed cane varieties explaining the functions of the test fields, primary stations, secondary stations and the increased plots for distribution of released varieties.

In September the Staffs of the U. S. D. A. sugar Station in Houma and the L. S. U. Agricultureal Experiment Station at Baton Rouge go over the seedlings and select 8 or 10 promising varieties for test field trials. After 3 or 4 years selections are made for the primary stations. From the primary stations

selections are made for the secondary stations. Selections from the secondary stations are used to seed the increased plots from which distributions of released varieties are made.

All this seed development is covered by the three way agreement signed by the Bureau of Plant Industry, the Louisiana Agriculture Experiment Station and the American Sugar Cane League.

Mr. Wm. J. Pyburn of the War Manpower Commission with offices in Baton Rouge discussed Industrial labor and its concern about the labor necessary to save the 1943 Sugar Crop. He stated that last year the sugar factories were able to operate without serious difficulties, but that the effect of the drain by Selective Service and War Industries now looks rather serious. There is no pool from which to draw labor and yet necessary labor must be found.

He suggested that the training of handicapped persons and women be considered. By establishing training centers in a number of localities it may be possible to develop individuals for a large number of jobs.

With respect to war plants, he suggested the possibility of inducing the plants to release special technical sugar men for the grinding season.

A pamphlet, listing all sugar factory jobs, is being prepared by the War Manpower Commission to assist in determining the detail needs of each sugar factory.

It was suggested that Mr. Terry be contacted to see that any person able to do any kind of work during grinding be off of the Relief Rolls.

Mr. Burguieres, Chairman of the Labor Committee, reported meeting with the Agriculture Extension Forces with reference to farm labor and stated that the Committee was well impressed with the activities of the County Agents.

Mr. Kemper reported on the efforts of the Grower-Processor Committee to work out with representatives of the Sugar Agency some type of additional payment plan covering the harvesting of the 1943 crop and the production of the 1944 crop.

Mr. Stanley Angelle and Mr. P. J. DeGravelles, County Agents of St. Martin and St. Mary Parishes, respectively reported on their efforts to secure the necessary farm labor.

Mr. Blumenthal suggested that the paroling of State Convicts be looked into.

Meeting adjourned.

MARCEL J. VOORHIES,
Secretary

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against foreign Competition

Vol. 21 NEW ORLEANS, LA., AUGUST 1, 1943 No. 21

Effect of Mosaic Caused by Different Strains of Virus Upon Yields of Susceptible Sugarcane Varieties

By Eaton M. Summers, Associate Pathologist, Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.

The effect of mosaic disease upon the yield of several varieties of sugarcane was reported by Summers and Rands[1] in 1935. Serious losses were shown to occur in most cases where diseased seed pieces were used for planting as compared with mosaic-free seed cane.

The seed cane used in planting these earlier tests was secured from field plantings of the different varieties without any particular attention to the history of the field or the disease in the cane. The discovery of the existence of a number of strains of the sugarcane mosaic virus[2, 3] suggested the probability that there might be differences in the effect of the different strains upon yields obtained from any variety susceptible to mosaic. A series of experiments was initiated, therefore, to investigate this point. The purpose of this paper is to give a brief summary of these experiments.

Planting material for these experiments was secured by inoculating healthy cane with different pure strains of the mosaic virus in the greenhouse. The plants that became infected were transferred to the field and increased for planting these tests. The varieties used were Co. 281 and Co. 290, the only commercial canes planted that were very susceptible to mosaic. A number of experiments have been conducted and there has been some variation in the results from year to year. Most of them were run through plant cane and 2 stubble crops. Considerable data have been accumulated and will be published in detail at a later date.

The results of plant cane and first stubble crops and a two-crop total of one experiment with each of these 2 varieties, Co. 281 and Co. 290, respectively, are presented in tables 1 and 2, as being fairly typical of results secured. These experiments were planted in the fall of 1937 and harvested in 1938 and 1939. Each experiment consisted of 7 objects with 7 plots of each, a total of 49 plots so arranged (ie. in a modified Latin square) as to offset any variation in the field. The 7 objects were the healthy control and 6 strains of mosaic as listed in the tables. With one exception, the strains were the same in both experiments.

The germination results in table 1 (Co. 281) do not show consistent reductions from plantings mosaic seed although there is usually some reduction. The severe effect of strains Dc is evident however, al-

[1]Summers, Eaton M., and Rands, R. D. Losses due to planting of mosaic seed cane. Sugar Bulletin 13(15): 2-6. May 1, 1935.

[2]Summers, Eaton M. Types of mosaic on sugarcane in Louisiana. Phytopathology 24(a): 1040-1042. 1934.

[3]Summers, Eaton M. A study of the common mosaic of sugarcane with special reference to strains of the virus. Proc. 6th Cong., Inter. Soc. Sugar Cane Tech. (Baton Rouge, La.), pp. 564-565. 1938.

THE SUGAR BULLETIN

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Marcel J. Voorhies, Editor

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though in the stubble crop it showed the best germination. This was probably the result of missing a freeze suffered by the others because this strain causes slower emergence. Fewer stalks were harvested from it both years and the yields were greatly reduced. This strain fortunately does not seem to be very widespread nor to spread very much in the field. The 2-year results show it to be significantly more severe than any of the other strains, all but one of which caused significant reductions as compared with healthy seed. Strain D caused some reduction in tonnage but this was not significant. Thus, in so far as this experiment is concerned the strains would fall into 3 classes: (1) strain D caused no significant reduction, (2) strains A, B, and F (2 collections) caused significant reductions as compared with the control and strain D. (3) strain Dc caused significant reduction over everything else.

In the Co. 290 experiment (table 2) the germination reductions were generally significant and typical of most of the other experiments. Strain D, contrary to results with Co. 281, appears to be the most severe strain on this variety. All strains caused highly significant reductions in sugar per acre in the 2-year total and strain Da was significantly less severe than all the other strains. This may be attributed largely to germination recovery in the plant cane crop. The yield reductions in Co. 290 are attributable to reduced tonnages in the mosaic plots due to fewer and lighter individual stalks. Sucrose (i.e. sugar per ton) yields were generally higher in the mosaic plots in this experiment. This is not the case in all experiments, however.

The importance of using mosaic-free seed cane of both Co. 281 and Co. 290 is shown by the results presented above. While many growers have discontinued Co. 281 it is still held in high regard by others. Co. 290 is widely grown and probably will continue to be the leading variety in the Teche section of the sugar belt for some time to come. The maintenance of healthy seed supplies of these varieties by roguing or selection was first advocated in 1933.[4] The feasibility of roguing on a commercial scale was proven by Shaffer[5] and has now become a firmly established practice. Renewed efforts to increase production during the present emergency certainly warrant strict attention being given to securing the best seed cane available. If one's own fields are heavily diseased it should be possible to secure a fresh start from any one of many growers to whom roguing has become an established field practice.

Moving of diseased seed cane from one area to another should be avoided. Extensive surveys have shown distinct differences in the strains that occur in different sections of the state. Strain D, for instance, is the only one that occurs to any extent in the southwestern part of the sugar district. Strains B and D are both common in the eastern section. The other strains used in these tests do not appear to occur very widely and probably are not of much economic importance. The only other widely occurring strain is "E" which has been collected, however, only in sirup-producing areas and never from Co. 281 or Co. 290 which appear to be highly resistant to infection by it.

The greatest danger from this standpoint would probably be in moving seed cane across the Atchafalaya River from east to west. Since strain D was the only one that was common west of this river at the time of the last survey in 1938, it might be possible to hold down the spread of the other strains to this area by using only mosaic-free seed cane when it is necessary to move any at all. This would necessarily be a self-imposed quarantine on each grower but is an important matter that should be considered whenever seed cane is moved any considerable distance. The practice of proper care in selecting or treating cane to be moved might also prevent the spread of other diseases, such as chlorotic streak, as well as insects and noxious weeds.

The alternative practice to roguing is, of course, to grow varieties that are resistant to or immune from mosaic. The varieties now available for general planting have not proven suitable for extensively replacing either Co. 281 or Co. 290. It is believed, however, that C.P. 34/120, which was introduced in the fall of 1942 and small-scale plantings of which are widely distributed, will replace these two varieties to a considerable extent in many areas, Further, there are numerous new varieties under test several of which give promise of proving suitable for culture in place of Co. 281 and Co. 290.

[4]Summers, Eaton M. A warning about mosaic in Co. 281. Sugar Bulletin 11(23): 3-4. September 1, 1933.

[5]Shaffer, M. L. Seed selection and roguing in the practical control of mosaic disease of sugarcane in Louisiana. Louisiana Agric. Exper. Sta. Bull. 308: 1-8. 1939.

TABLE 1. Comparative growth and yield of the Co. 281 variety planted with seed cane infected with different strains of the mosaic virus. (Experiment 29)

Type of seed cane used (Virus strain and accession No.)	Number of plots	Germination Counts		Millable stalks per acre	Cane per acre	Yield of 96° sugar[2]		
		Plants	Mosiac			Per ton	Per acre	Reduction
PLANT CANE, HARVESTED NOVEMBER 28, 1938								
		Number	Percent	Number	Tons	Pounds	Pounds	Percent
Healthy (Control)	7	35	1	40,679	40.07	193.9	7770	----
Strain A (Acc. 1)	7	35	100	40,964	37.04	197.8	7327	5.7
Strain B (Acc. 2)	7	35	100	41,607	35.50	201.9	7167	7.8
Strain D (Acc. 21)	7	36	100	43,643	39.64	194.3	7702	0.9
Strain Dc (Acc. 410)	7	25	100	33,179	24.96	191.1	4770	38.6
Strain F (Acc 430)	7	29	100	37,357	32.55	198.2	6451	17.0
Strain F (Acc. 546)	7	31	100	39,321	36.41	198.4	7224	7.0
Difference required for P.=.05[1]	----	5		4,132	3.17	7.5	714	9.2
FIRST STUBBLE, HARVESTED NOVEMBER 20, 1939								
Healthy (Control)	7	62	29	40,857	41.62	204.98	8531	----
Strain A (Acc. 1)	7	60	100	39,000	36.23	200.57	7267	14.8
Strain B (Acc. 2)	7	60	100	39,679	36.07	203.53	7341	13.9
Strain D (Acc. 21)	7	64	100	40,929	39.61	206.61	8184	4.1
Strain Dc (Acc. 410)	7	68	100	36,393	29.91	203.37	6083	28.7
Strain F (Acc. 430)	7	54	100	36,500	34.11	207.80	7088	16.9
Strain F (Acc. 546)	7	52	100	37,750	34.39	205.95	7083	17.0
Difference required for P.=.05	----	9	----	4,359	4.29	9.68	1041	12.2
TWO CROP YIELDS								
Healthy (Control)	14	----	----	81,536	81.69	----	16,301	----
Strain A (Acc. 1)	14	----	----	71,964	73.27	----	14,594	10.5
Strain B (Acc. 2)	14	----	----	81,286	71.57	----	14,508	11.0
Strain D (Acc. 21)	14	----	----	84,572	79.25	----	15,886	2.5
Strain Dc (Acc. 410)	14	----	----	69,572	54.87	----	10,853	33.4
Strain F (Acc. 430)	14	----	----	73,857	66.66	----	13,539	16.9
Strain F (Acc. 546)	14	----	----	77,071	70.80	----	14,307	12.2
Difference required for P.=.05	----	----	----	5,582	5.22	----	1,237	7.6

[1] Minimum difference considered necessary for results to be significant.
[2] Calculated.

TABLE 2. Comparative growth and yield of the Co. 290 variety planted with seed cane infected with different strains of the mosaic virus. (Experiment 31)

Type of seed cane used (Virus strain and accession No.)	Number of plots	Germination Counts		Millable stalks per acre	Cane per acre	Yield of 96° sugar[2]		
		Plants	Mosiac			Per ton	Per acre	Reduction
PLANT CANE, HARVESTED NOVEMBER 29, 1938								
		Number	Percent	Number	Tons	Pounds	Pounds	Percent
Healthy (Control)	7	51	0	35,107	44.52	220.5	9817	----
Strain A (Acc. 1)	7	43	100	34,643	40.61	225.2	9145	6.8
Strain B (Acc. 2)	7	47	99	35,714	40.82	220.2	8989	8.4
Strain D (Acc. 21)	7	43	98	32,214	38.59	223.0	8606	12.3
Strain Da (Acc. 13)	7	44	55	36,036	41.16	223.1	9183	6.5
Strain Dc (Acc. 410)	7	46	95	34,143	39.20	225.0	8820	10.2
Strain F (Acc. 546)	7	42	100	33,786	39.89	232.9	9290	5.4
Difference required for P.=.05[1]	----	4	----	3,467	2.11	12.3	711	7.2
FIRST STUBBLE, HARVESTED NOVEMBER 15, 1939								
Healthy (Control)	7	129	3	40,286	52.37	177.26	9283	----
Strain A (Acc. 1)	7	111	99	38,000	43.03	177.51	7638	17.7
Strain B (Acc. 2)	7	120	99	37,964	44.05	175.53	7732	16.7
Strain D (Acc. 21)	7	109	94	34,071	41.84	183.04	7658	17.5
Strain Da (Acc. 13)	7	120	50	37,179	47.02	186.34	8762	5.6
Strain Dc (Acc. 410)	7	107	89	34,857	41.34	183.30	7578	18.4
Strain F (Acc. 546)	7	113	99	36,929	42.98	182.73	7854	15.4
Difference required for P.=.05	----	14	----	2,409	2.70	8.97	532	5.7
TWO CROP TOTAL YIELD								
Healthy (Control)	14	----	----	75,393	96.89	----	19,100	----
Strain A (Acc. 1)	14	----	----	72,643	83.64	----	16,783	12.1
Strain B (Acc. 2)	14	----	----	73,678	84.87	----	16,721	12.5
Strain D (Acc. 21)	14	----	----	66,285	80.43	----	16,264	14.8
Strain Da (Acc. 13)	14	----	----	73,215	88.18	----	17,945	6.0
Strain Dc (Acc. 410)	14	----	----	69,000	80.54	----	16,398	14.1
Strain F (Acc. 546)	14	----	----	70,715	82.87	----	17,144	10.2
Difference required for P.=.05	----	----	----	4,134	3.33	----	870	4.6

[1] Minimum difference considered necessary for results to be significant.
[2] Calculated.

Increased Acreage

Sugar cane acreage in the United States this year amounts to 331,000 acres, according to a recent announcement by the U. S. Department of Agriculture. Last year 322,600 acres were cultivated and the ten year average is 273,300 acres. Louisiana's acreage this year is placed at 298,000 and Florida's 33,000. The U. S. beet sugar acreage is 39% below that of 1942 and is estimated at 636,000 as compared with 1,045,000 last year.

Cane Production

The July 1st condition of the sugarcane crop in Louisiana and Florida indicates a production of 7,049,000 tons of which Louisiana is expected to produce 5,960,000 tons and Florida 1,089,000 tons. This is about 17% above the 1942 production. Cane for syrup in Louisiana this year is expected to occupy about 23,000 additional acres and Florida's syrup acreage is estimated at 12,000.

Zone Expanded

Refiners in New York, Philadelphia and Baltimore were permitted, effective July 19th, to sell refined sugar in Eastern Ohio, a territory formerly restricted to New Orleans and West Coast refiners and beet producers. The ceiling price in this territory is 5.45 cents a pound and the eastern refiners must sell at that price. The 5.60 cents a pound ceiling still prevails in the East.

Official Release

(Wage Order For Workers In Sugar and Related Products Industry)

UNITED STATES DEPARTMENT OF LABOR
WAGE AND HOUR DIVISION
NEW YORK, NEW YORK

TITLE 29—LABOR
CHAPTER V—WAGE AND HOUR DIVISION
In the Matter of the Recommendation of Industry Committee No. 50 for a Minimum Wage Rate in the Sugar and Related Products Industry

WAGE ORDER

PART 635—*Minimum Wage Rate in the Sugar and Related Products Industry*

WHEREAS, on October 5, 1942, pursuant to Section 5 (b) of the Fair Labor Standards Act of 1938, herein referred to as the Act, the Administrator of the Wage and Hour Division of the United States Department of Labor, by Administrative Order No. 162, appointed Industry Committee No. 50 for the Sugar and Related Products Industry, herein called the Committee, and directed the Committee to recommend minimum wage rates for the Sugar and Related Products Industry in accordance with Section 8 of the Act; and

WHEREAS, the Committee included six disinterested persons representing the public a like number of persons representing employers in the Sugar and Related Products Industry, and a like number of persons representing employees in the Industry, and each group was appointed with due regard to the geographical regions in which the Sugar and Related Products Industry is carried on; and

WHEREAS, on January 8, 1943, the Committee, after investigating economic and competitive conditions in the Industry, filed with the Administrator a report containing its recommendation for a 40-cent minimum hourly wage rate in the Sugar and Related Products Industry; and

WHEREAS, after notice duly published in the *Federal Register* on February 13, 1943 Major Robert N. Campbell, the Presiding Officer designated by the Administrator, held a public hearing upon the Committee's recommendation at New Orleans, Louisiana on March 4, 1943, at which time all interested persons were given an opportunity to be heard; and

WHEREAS, the complete record of the proceeding before the Presiding Officer has been transmitted to the Administrator; and

WHEREAS, the Administrator, upon reviewing all the evidence adduced in this proceeding and giving consideration to the provisions of the Act, with special reference to Sections 5 and 8, has concluded that the Industry Committee's recommendation for the Sugar and Related Products Industry, as defined by Administrative Order No. 162, is made in accordance with law, is supported by the evidence adduced at the hearing, and, taking into consideration the same factors as are required to be considered by the Committee, will carry out the purpose of the Act; and

WHEREAS, the Administrator has set forth his decision in an opinion entitled "Findings and Opinion of the Administrator in the Matter of the Recommendation of Industry Committee No. 50 for Minimum Wage Rates in the Sugar and Related Products Industry," dated this day, a copy of which may be had upon request addressed to the Wage and Hour Division, United States Department of Labor, 165 West 46th Street, New York, New York.

NOW, THEREFORE, it is ordered that:

Section 635.1—*Approval of Recommendation of Industry Committee No. 50.* The Committee's recommendation is hereby approved, and in accordance with such recommendation,

Section 635.2—*Wage Rate.* Wages at a rate of not less than 40 cents per hour shall be paid under Section 6 of the Act by every employer to each of his employees who is engaged in commerce or in the production of goods for commerce in the Sugar and Related Products Industry; and

Section 635.3—*Posting of Notices.* Every employer employing any employees so engaged in commerce or in the production of goods for commerce in the Sugar and Related Products Industry shall post and keep posted in a conspicuous place in each department of his establishment where such employees are working such notices of this Order as shall be prescribed from time to time by the Wage and Hour Division of the United States Department of Labor; and

Section 635.4—*Definition of the Sugar and Related Products Industry.* For the purpose of this Order the term "Sugar and Related Products Industry" means:

> The production of sugar, molasses, and syrups, of all types, made wholly or in part from maple sap, sugar beets, sugarcane, sorgo, or any derivative therefrom, and the production of beet pulp, bagasse, lime cake, and related by-products: *Provided however, That fountain syrups commonly so* known shall not be included in this definition.
>
> The production of any products covered under this definition shall be deemed to begin with the loading of the raw material at the farm.

Section 635.5—*Scope of definition.* The definition of the Sugar and Related Products Industry covers all occupations in the Industry which are necessary to the production of the products covered by this definition, including clerical, maintenance, shipping and selling occupations: *Provided, however,* That in a wholesaling or selling department of a manufacturing establishment clerical, maintenance, shipping and selling employees, the greater part of whose work relates to the sales of articles which have been purchased for resale or of articles not covered by this definition, shall not be deemed to be covered by this definition: *And provided further,* That where an employee covered by this definition is employed during the same work-week at two or more different minimum rates of pay, he shall be paid the highest of such rates for such work-week unless records concerning his employment are kept by his employer in accordance with applicable regulations of the Wage and Hour Division.

Section 635.6—*Effective Date.* This Wage Order shall become effective June 21, 1943.

Signed at New York, New York, this 20th day of May, 1943.

Sections 635.1 to 635.6 inclusive, issued under the authority contained in Section 8, 52 Stat. 1064; 29 U.S.C., Supp. IV, sec. 208.

signed
L. METCALFE WALLING
Administrator
Wage and Hour Division
U. S. Department of Labor

Published in
Federal Register
May 28, 1943

Official Release

(Revised 1942 Fair and Reasonable Prices For Florida Sugarcane)

Determination of Fair and Reasonable Prices for the 1942 Crop of Florida Sugarcane for Sugar (Revised)

Pursuant to section 301 (d) of the Sugar Act of 1937, as amended, and Executive Order No. 9322, isued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

Fair and reasonable prices for the 1942 crop of Florida sugarcane for sugar. Fair and reasonable prices for the 1942 crop of Florida sugarcane shall be not less for sugarcane of like quality in terms of commercially recoverable sugar than those provided for in Sugar Determination Number 147, issued October 8, 1942, for mills defining standard sugarcane as sugarcane containing 11½ per centum to 12½ per centum of sucrose in the normal juice, equivalent in terms of commercially recoverable sugar to 10.354 per centum to 11.432 per centum of sucrose in the crusher juice. The price basis for sugar shall be determined in accordance with whichever of the following options may be agreed upon: (1) the average price per pound of 96° raw sugar, duty-paid at New York less .17 cent (plus transportation tax on such amount payable under section 620 of the Revenue Act of 1942) per pound to adjust for the appropriate freight differential for the week in which such sugarcane is delivered, or (2) the average price per pound of 96° raw sugar, duty-paid at New York less .17 cent (plus transportation tax on such amount payable under section 620 of the Revenue Act of 1942) per pound to adjust for the appropriate freight differential for the period beginning October 15, 1942 and ending May 31, 1943, except that, if such prices do not give full effect to orders or regulations of the Federal Government pertaining to the establishment of a price for 96° raw sugar, duty-paid at New York, the Chief of the Sugar Branch may substitute such prices as will give effect to any such orders or regulations, and except, further, that if through any orders or regulations of the Federal Government the existing relationship between the price of 96° raw sugar, duty-paid basis, between New York City and Savannah, Georgia, should be changed, the price at Savannah, Georgia, except for the differential existing on October 15, 1942, shall be governing. *Provided, however,* That on each ton of Florida sugarcane there shall be paid a molasses bonus equal to 2.75 times the amount, if any, by which the average net liquidation from disposal of blackstrap or final molasses exceeds 6.75 cents per gallon, f. o. b. sugarhouse tanks at Clewiston, Florida, during the 12 months ended May 31, 1943: *And provided further,* That the established customs and practices with respect to methods of sucrose analysis, deductions for frozen sugarcane based upon decreased boiling house efficiency, fiber content determinations and deductions, definition of delivery points, delivery schedules, and similar terms, as employed in connection with the purchase of the 1941 crop shall be employed in connection with the purchase of the 1942 crop, and the processor shall not, through any subterfuge or device whatsoever reduce the returns to the producer below those contemplated by this determination, but nothing in this subparagraph shall be construed as prohibiting modifications of practices which may be made necessary by unusual circumstances, and such modifications to be subject to review by the War Food Administrator, or his authorized agent, in the event of changes alleged to be unfair to either the producer or the processor.

This determination supersedes the determination entitled "Determination of Fair and Reasonable Prices for the 1942 Crop of Florida Sugarcane for Sugar, Pursuant to The Sugar Act of 1937, as Amended".

Done at Wastington, D. C., this 20th day of May 1943.

CHESTER C. DAVIS,
War Food Administrator.

[SEAL]

Ditch Bank Rows--Defense Against Encroachment of Weeds

By George Arceneaux, Agronomist, Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.

With depleted manpower for hoe gangs the increasing menace of weeds in sugarcane comes sharply to the front. The first line of defense is direct control of weeds in the ditches where they grow luxuriantly in the highly fertile soil concentrated there by washing rains. Emergency methods of direct control of weeds in ditches, on ditch banks, and in cane fields by flaming, chemical sprays, or other labor-saving means must be given attention immediately.

It is safe to say that a satisfactory solution of the problem of controlling weeds on ditch banks and on adjacent crop rows is also one of the most pressing needs facing the Louisiana sugarcane growers at this time. Ditch banks afford an ideal situation for the establishment of colonies of Johnson grass (*Sorghum halepense*) and other perennial weeds. In the course of time such weeds gradually encroach on the adjacent row of cane—a process greatly aided by the presence of gaps in the line of cane. Under conditions conducive to spread, this migration proceeds from row to row until the entire "cut"—usually comprising from 16 to 24 rows—is infested. In extreme cases, the area becomes a solid patch of weeds.

The importance of economic losses due to Johnson grass and other weeds in sugarcane fields has been well recognized. Under existing conditions of greatly curtailed labor supply, such losses may attain still greater importance. Therefore information on effective weed control measures is of great importance at this time. This paper briefly summarizes some of the measures which may be recommended from results of tests conducted at the Houma Station of the Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, U. S. Department of Agriculture.

Selection of Varieties

In selecting a sugarcane variety for ditch bank plantings, due consideration should be given to the exacting demands of the environment. Only varieties of extreme vigor and satisfactory stubbling qualities should be planted on ditch bank rows, regardless of the variety to be planted over the remainder of the "cut". In addition, the ideal variety for ditch bank

rows should effectively shade the ground at a relatively early date. Co. 290 is probably the most satisfactory one of the released varieties for this purpose with C.P. 34/120 a good second. C.P. 29/116 possesses the required vigor and is an excellent stubbler but does not ordinarily shade the ground sufficiently early for best results. Co. 281 and C.P. 29/320 should not be planted on ditch bank rows.

Spacing

The optimum distance of the first line of cane from the side of the ditch cannot be precisely determined in the light of information now available and as a matter of fact will be largely controlled by factors related to practical plantation management. It is obviously important to place the first row of cane so as to shade the ditch bank as completely as possible. Rows at close proximity to ditches cannot be satisfactorily cultivated by means of heavy tractors due to the danger of caving it, therefore under plantation conditions the first line of cane is commonly spaced from 5 to 8 feet from the side of the ditch. Results of our tests show that the line of cane can be satisfactorily placed at a distance of 3 or 4 feet from the side of the ditch if the cultivation is done by means of light mule-drawn implements. Incidently, it should be found possible to design tractor powered implements with which the ditch bank row could be cultivated by straddling the second row with the tractor.

Another deterrent to the spread of weeds from ditch banks is the effective and early shading of the middle between the first and the second lines of cane. In order to accomplish this it will be found advantageous to place the second row from the ditch as close to the first row as practically possible. From the results of preliminary tests a spacing of 4½ to 5 feet for this row may be recommended.

Under average field conditions row widths ranging from 5¾ to 6 feet have been found most advantageous. Satisfactory results obtained with closer spacing near ditches may probably be attributed to more favorable growth conditions due to better drainage. Such differential spacing of single rows may complicate the performance of mechanized operations but the incidental difficulties are not considered insurmountable.

Time of Planting

The good stands and vigorous plant cane growth ordinarily obtained from summer planting of adaptable varieties should be utilized by growers in fighting weeds along the ditches. It is therefore recommended that a special effort be made to plant as many of the ditch bank rows as possible during the period between August 1 to August 15 wherever summer planting has proved practicable. This plan presents the advantage that ditch bank rows can often be plowed at times when the remainder of the "cut" is too wet for planting operations.

Among the released varieties, C.P. 28/19, Co. 290, C.P. 29/116 and C.P. 34/120 have proved satisfactorily adapted to summer planting. In preliminary tests the unreleased varieties C.P. 33/409 and 36/92 have also shown unusual promise for summer planting. It is believed that the extremely rank and early plant cane growth obtained from summer planted C.P. 33/409 and the variety's extreme vigor and satisfactory stubbling qualities may prove useful weapons in the fight to prevent a further encroachment of ditch bank weeds on cultivated areas.

In conclusion it should be pointed out that recommendations outlined above are derived largely from results of tests conducted on limited experimental scale, and it is realized that some difficulty may be experienced in applying some of them to routine plantation procedure. However, the process of mechanization and standardization, as necessary as it is on sugarcane plantations at this time, should not be followed to the complete disregard of important principles of field ecology.

Ditch bank rows in the aggregate account for approximately 10% of the acreage of the Louisiana Sugarcane District. Under present conditions, this important fraction of our acreage is not only producing at a rate much below capacity because of the feeble and increasingly unsuccessful struggle of our crop plants with weeds, but in addition affords easy invasion points to colonies of Johnson grass and other perennial weeds. The direct and indirect economic losses thereby incurred are sufficiently important to merit serious consideration.

Soil areas immediately adjacent to ditches are usually the most fertile of the field. Much of the eroded surface soil is deposited in ditch bottoms and then accumulated along ditches in the course of periodic spading needed to maintain proper depth of ditch. In this environment Johnson grass and the more recent intruder, Alligator weed (*Alternanthera philoxeroides*), will grow luxuriantly, and, lacking effective opposition, will spread toward the interior to the "cut". In meeting this problem efforts should be directed not only at curbing weed growth but, primarily at the more profitable task of utilizing the wasting soil fertility in the production of sugarcane. In attempting the latter every available means should be utilized toward placing the sugarcane plant at an advantage in its competition with weeds. Therefore only varieties possessing unusual vigor, superior stubbling qualities, and effective shading capacity should be used. The competition of cane plants with nearby weeds can be made more effective by careful attention to field practices. It might be mentioned here that the ditch bank row should receive generous fertilization in order to promote vigorous growth. The fertilizer should all be applied on the side of the row away from the ditch in order to place an additional factor in favor of the cane plant.

Measures outlined above should prove reasonably effective where ditch banks and adjoining rows have not become extensively infested with Johnson grass or Alligator weed. In many of the aggravated cases, however, it is probable that additional control measures will be found necessary before sugarcane plants can be placed on better-than-even terms with neighboring weeds.

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Official Release

(Abandoment and Crop Deficiency Payments for Puerto Rico)

Determination of (1) Normal Yield of Commercially Recoverable Sugar per Acre and (2) Eligibility for Payment with respect to Abandonment and Crop Deficiency for Sugarcane Farms in Puerto Rico, Pursuant to the Sugar Act of 1937 as Amended (Revised).

Pursuant to the provisions of section 303 of the Sugar Act of 1937, as amended, and Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

Normal yield of commercially recoverable sugar per acre and eligibility for payment with respect to abandonment and crop deficiency for sugarcane farms in Puerto Rico—(a) *Normal yield calculation.* (1) The normal yield of commercially recoverable sugar per acre for any farm in Puerto Rico on which sugarcane is grown and marketed (or processed by the producer) for the extraction of sugar during all three of the 1938-39, 1939-40 and 1940-41 crop years shall be the product of:

(i) The average number of hundredweights of sugar, raw value, recovered per short ton of sugarcane processed during such crop years for the extraction of sugar by the mill, or mills, where such sugarcane was ground, and

(ii) The average number of short tons of sugarcane per acre harvested on the farm for the extraction of sugar during the said three crop years.

(2) The normal yield of commercially recoverable sugar per acre for any farm on which sugarcane was not grown and marketed (or processed by the producer) for the extraction of sugar during all three of the 1938-39, 1939-40, and 1940-41 crop years, shall be the average of such yields for all farms, within the same municipality, on which sugarcane was harvested for the extraction of sugar during all three of the 1938-39, 1939-40, and 1940-41 crop years.

(b) *Eligibility for abandonment and deficiency payments.* Any farm located in a municipality in which the actual yields of commercially recoverable sugar per acre from the sugarcane for farms comprising 10 percent or more of the acreage of such sugarcane were 80% or less of the normal yields therefor, because of drought, flood, storm, freeze, disease or insects, shall be eligible for abandonment and deficiency payments: *Provided, however,* That any farm which is located outside of but adjacent to, a municipality in which the foregoing requirement is met, and in which conditions affecting sugarcane culture are similar to conditions prevailing in such municipality, as certified by the Officer or Acting Officer in Charge of the Agricultural Adjustment Agency, shall be eligible for abandonment and deficiency payments.

This determination supersedes the "Determination of (1) Normal Yield of Commercially Recoverable Sugar per Acre and (2) Eligibility for Payment with Respect to Abandonment and Crop Deficiency for Farms in Puerto Rico, Pursuant to section 303 of the Sugar Act of 1937, issued June 21, 1938."

Done at Washington, D. C., this 25th day of May, 1943.

CHESTER C. DAVIS,
War Food Administrator.

[SEAL]

Official Release
(U. S. Beet Prices)

U. S. DEPARTMENT OF AGRICULTURE
FOOD DISTRIBUTION ADMINISTRATION
SUGAR BRANCH
Washington, D. C.

Determination of Fair and Reasonable Prices for the 1942 and 1943 Crops of Sugar Beets

Pursuant to the provisions of subsection (d) of section 301 of the Sugar Act of 1937, as amended, and Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

Fair and reasonable prices for the 1942 and 1943 crops of sugar beets. Fair and reasonable prices for the 1942 and 1943 crops of sugar beets shall be as follows:

(a) With respect to the 1942 crop of sugar beets, rates not less than those specified in the contract under which such sugar beets were marketed;

(b) With respect to the 1943 crop, rates not less than those embodied in the price schedules for the sugar beet price support program, termed the 1943 Sugar Beet Production Program, as offered to each processor by the Commodity Credit Corporation.

Done at Washington, D. C., this 28th day of May 1943.

JESSE W. TAPP,
Acting War Food Administrator.

[SEAL]

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against Foreign Competition

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Mr. Shaffer Addresses the War Food Administration

July 19, 1943

To the Honorable Marvin Jones
War Food Administrator
Washington, D. C.

The War Food Administration desires a maximum production of food, including sugar as the principal energy-giving food.

1943 Sugar Crop

Louisiana sugarcane growers have planted and brought to a satisfactory degree of cultivation acreage which gives promise of producing more sugar than has been produced in Louisiana for the past several years. However, the approaching harvest is now anticipated by the sugarcane grower with uncertainty and alarm because of the extreme shortage of labor and the absence of dependable bases for overcoming the shortage at harvest time when extra labor is always needed.

The problems which confront the sugarcane grower are the direct result of war conditions and of Government regulations. They are principally two-fold: (1) increased costs of production with no increase in revenue, and (2) extreme shortage of labor. The shortage of labor has been brought about by

1. the drafting of men for selective service;
2. the migration of men to the war industries at New Orleans, Baton Rouge, Houma, Morgan City, Lake Charles and other nearby places, where much higher minimum wages are paid;
3. The moving of families to metropolitan areas where every member of the family can obtain employment;
4. The lateness of the cotton and rice crops, which means that the labor from the cotton and rice areas will come to the sugarcane belt long after the beginning of the sugarcane harvest, if at all.

The sugarcane grower is hampered and prevented from competing successfully for labor by the fact that the price of raw sugar (and therefore the price of sugarcane, which depends directly upon raw sugar market quotations) was fixed at a relatively low level in August, 1941, well in advance of the enactment of the Price Control Act and before the fixing of ceiling prices for other foods and farm products. There has been no ceiling price change on raw sugar since January, 1942, which was before the Price Control Act and the General Maximum Price Regulations went into effect. In addition, the price of farm labor for the year 1943 has increased over 1942 some 20 per cent for the cultivating season and it is contemplated will be increased approximately 45 per cent for the coming harvest season. The sum total of this increase in labor cost alone will amount to approximately $.75 per ton of cane. The above increase for labor does not take into consideration the advance in prices of other commodities such as fertilizer and supplies, nor does it take into consideration the decrease in the quality of labor now employed in the cane fields due mostly to age and lack of experience. If these other costs are taken into consideration, the estimate of the assistance needed would have to be raised correspondingly.

Another development which is having an influence on labor conditions has been brought about by the establishment of a $.40 per hour minimum in sugar

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The American Cane Growers' Assn.
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factories by a ruling of the Wage and Hour Division under the Fair Labor Standards Act. The common laborers in the field and factory of the sugar Parishes are drawn from the same groups and there has existed a more or less definite relationship between wage scales paid in the sugar factory and in the neighboring fields from which sugarcane is delivered.

In 1942 when the scarcity of shipping had seriously reduced the supply of sugar available from off-shore areas to such an extent that United States consumers had to be rationed and zoned, the sugarcane growers of Louisiana produced 400,000 tons of sugar. An equivalent acreage was planted for harvesting in 1943; the Crop Reporting Board has just announced that the 1943 acreage will be 298,000 acres as against 295,000 acres in 1942. Better growing conditions this year indicate the possibility of materially increased production, taxing the capacity of existing processing facilities. In order to insure the harvesting of all of this growing cultivated cane, provision must be made for meeting the increased costs and for employing the extra labor needed to save the crop.

It is our understanding that the War Food Administration is primarily concerned with a maximum production of foods in the United States. Congress has authorized the Commodity Credit Corporation to encourage the production of food by supporting the planting, cultivating and harvesting of food crops. Normally the program covering a particular crop is adopted in advance of the planting and the primary goal is increased acreage even though the ultimate goal is increased production of food. From the standpoint of food production, therefore, we submit that the authority has been granted the Commodity Credit Corporation to support food production at any point in the crop year operations where assistance is needed to bring about maximum production. We further submit that from the standpoint of food production, there is greater justification in saving a crop that is already planted, cultivated and brought to maturity, than for offering inducements to plant more acreage for a future crop. There is more certainty as to obtaining results. There is even the obligation of acting to prevent substantial losses in food in the face of a labor crisis created by war conditions and aggravated by the necessity of completing the harvest before adverse weather conditions, which normally prevail in the winter season, drastically curtails production when all farming activities have been completed excepting the final delivery to market.

The War Food Administration can provide the insurance necessary to save all growing sugarcane and to obtain a maximum production of sugar in Louisiana by offering the assistance of its Office of Labor and the Louisiana Extension Division in the recruitment of labor, and by a Commodity Credit Corporation program to support maximum sugarcane production. Recruitment assistance is solicited by the sugarcane growers of Louisiana on the basis of a plan whose purpose is to fulfill the requirements of the Louisiana sugar industry as a whole. The requirements of the industry, as well as they may be estimated for the harvesting operations at this time, are as follows:

The Crop Reporting Board estimates a production of sugarcane for sugar and seed of 5,960,000 tons. Estimating that each laborer will harvest 100 tons, a total of 59,600 laborers are needed in the field. It has been estimated by the Louisiana Extension Division that approximately one-half, or roughly 30,000 laborers, are available on sugarcane farms and in the vicinity. It is hoped that some 200 mechanical harvesters will be in use this year, which should be equivalent to replacement for 10,000 laborers. In addition, factories which grind the cane need about 5,000 extra laborers. Therefore, it will be necessary to recruit approximately 25,000 extra laborers to insure the full manpower for saving all growing sugarcane and for producing a maximum tonnage of sugar.

Recruitment of labor will not succeed to any appreciable extent in overcoming the shortage, without important increases in the wage levels offered to labor. The harvesting of the 1942 crop of sugarcane in Louisiana was accomplished at a base wage rate of $.21 per hour. It is admitted universally that this rate will not be attractive to labor for the harvesting operations in 1943. In consequence, it becomes necessary for sugarcane growers to pay more for labor in order to keep the laborers who now live on the farm or in farming communities adjacent thereto. The attractions of the $.63 per hour minimum being paid at Morgan City and $.65 per hour minimum for common labor at Houma, within the sugar belt, and the equivalent or higher rates at New Orleans, Baton Rouge and Lake Charles, nearby, have attracted much labor away from the cane growers.

The ceiling price on raw sugar remains inflexible, even though it was established before increased wage scales became prevalent and before war industries were established in Louisiana. So it has become a question of how the cane grower can keep his labor at home and satisfied, in addition to recruiting the extra labor needed for the harvesting operations.

It is not possible to state accurately what the average rate of pay must become in order to obtain enough labor to harvest the crop. The consensus of opinion in Louisiana among practical men is that the base wage rate for cane cutters will amount to approximately $.30 per hour. This will maintain the usual balance between field and factory wage rates. On this basis the average increased cost for harvesting laborers will be $.54 per ton of cane. It is agreed that if sugarcane growers are forced into open unregulated competition among themselves and with war industries for labor, the average wage demanded will be considerably higher, which would mean a corresponding increase in cost per ton; but the limitation upon the revenue of the grower prevents him from paying such added costs, unless he is granted a better price for his product or the assistance of a support program. On the other hand, if the WFA adopts a program of assistance in the recruitment of labor and by providing a support payment under which all growers will be on an equal footing, the average rate may be kept nearer to the $.30 level per hour.

The foregoing discussion has not taken into consideration the freeze hazard. A freeze occurring in late December would make less difficult an adjustment of labor to a maximum harvest result. Correspondingly an early freeze in November would aggravate conditions to a point of definite losses in money returns and in sugarcane saved. Prudence and practical experience dictate that farmers must be prepared for and provide against adverse weather conditions.

In the event of an extreme shortage of labor, an early freeze or other adverse weather conditions, it may become necessary to cut cane for the mill without stripping. If such an emergency should arise, it will involve some unusual hardships upon the factories which would have to take into their mills greater amounts of trash than is normally the case.

The War Food Administration, acting through the Commodity Credit Corporation, has entered into contracts whereby growers of sugar beets will become the beneficiaries of sustaining-payments amounting to approximately $1.50 per ton of sugar beets harvested as the 1943 crop. The basis of computing the payment in each case is the recoverable sugar, just as the conditional payments under the Sugar Act are computed. According to a statement issued by WFA, the total returns to beet growers on the 1943 crop is now expected to equal 125 per cent of parity.

The Congress of the United States has consistently provided equality of treatment as its policy in dealing with sugar beet growers and sugarcane growers under the Sugar Act. Another declared policy of Congress is parity for all growers of farm products. Up to this time sugarcane growers have not been offered a program providing uniformity of treatment, and under present conditions they can anticipate returns amounting to only 88 per cent of parity on the basis of the current index, which is contrary to both declared policies of Congress above mentioned.

It can be stated and substantiated that with an additional $.85 per ton of sugarcane (equivalent to $.50 per 100 pounds of sugar) the grower will have reasonable insurance and encouragement to obtain needed labor, and to plan and carry out his harvesting operations with a reasonable hope of completing them successfully. By means of such a program, the WFA will gain assurance that Louisiana will contribute a maximum amount of sugar in 1943 and 1944 to meet the consumption requirements of the United States.

Farmers plan on the basis of their experience and of existing conditions. The planting of sugarcane in Louisiana is done in August, through September and the early part of October. Thus, the planting of the 1944 crop will immediately precede the harvesting of the 1943 crop. The heart and mind of the sugarcane grower and therefore his decision regarding the acreage he will plant this Fall, will be guided necessarily by the outlook he has for harvesting his 1943 crop. If he is offered Government assistance in meeting added costs and in obtaining needed labor, he will be encouraged as to the harvest as well as to his planting. The two are inseparable, except to the extent that a farmer has reasons to feel that conditions which exist in the Fall of 1943 are likely to be improved, or aggravated, in the Fall of 1944. Unfortunately, in times of war it is hardly justifiable to expect an improvement with respect to either labor or costs from year to year, until the war is over. It is apparent that farmers cannot logically base their hopes or expectations upon improved conditions in 1944, particularly if current conditions indicate added 1943 harvest costs which will bring money losses, and labor shortages resulting in sugarcane and sugar losses. WFA can furnish the basis of encouragement and stimulated hope needed to give the 1943 harvest a brighter outlook and accordingly to encourage a full planting of sugarcane for 1944.

1944 Sugar Crop

The records of the Agricultural Adjustment Administration show that there were more than 12,000 farms in Louisiana producing sugarcane for sugar four years ago. In 1942 there were only 9,000 farms producing sugarcane for sugar, indicating the regrettable fact that altogether too many of our small farmers are going out of the production of sugarcane, and in many cases moving away from the farm. The records for 1943 show that there will be less than 9,000 farms. This trend demonstrates that the problems and costs of growing sugarcane have been increasing under war conditions, while the ceiling price of raw sugar makes more difficult the solution of problems or the recovery of costs. Admittedly, the labor shortage and the rise in costs of production present greater difficulties in 1943 and will tend to cause more discouragement, unless the Government renders needed assistance for the planting and production of sugarcane.

The fact that sugarcane acreage for 1943 has been maintained for the Louisiana industry as a whole, indicates that the larger farms have planted more acreage in sugarcane. However, there are definite limitations to the number of acres that can be planted in cane. The farming practices of the Sugar Act restrict the proportion of sugarcane acreage to legumes. Besides, sugarcane must be planted in rotation and the maximum cycle has probably been reached and in some cases exceeded. Consequently, the ability of large farms to make up for acreage losses caused by the defection of small farmers cannot be extended further.

The shipping situation with respect to the importation of sugar from off-shore areas has become more encouraging, and yet it is not possible to declare that shipping difficulties have been eliminated. As

long as there is doubt that ships will be available for transporting sugar, the need for production of more sugar on the continent is absolute. It would not be reasonable for any one to anticipate that the production of sugar in the United States will create a surplus for many years to come. The consumption requirements of the United States continue to be great even under rationing, but the demand for sugar under Lend-Lease has been increasing and will continue to increase throughout the war. If the policy of feeding liberated nations is carried out the need for sugar will continue to rise even after peace is declared. The loss of the Philippines and Java as sugar exporting areas, reduces the prospect of normal world sugar supplies in proportion. The reduction of beet planted acreage in 1943 and the effect of labor shortages on Florida production for 1942-1943 already emphasize the importance of a continued maximum production of sugar in Louisiana.

It is the hope of all agriculture that the Office of Labor will materially help towards the solution of labor problems, and the needs of Louisiana sugar growers will certainly be included. The Louisiana Extension Division has made surveys in anticipation of the harvest labor requirements and has inaugurated a program of assistance. The necessity for and the amount of sustaining payments on the 1944 crop will depend to a large degree on the scope and success of the labor program of WFA.

The formulation of a sugarcane support program is necessary this early because the planting of the 1944 crop will begin by August 1st. The stimulation and encouragement needed by the grower will be most effective if a commitment or a program is announced prior to the actual planting of the crop. Plans for planting sugarcane in Louisiana should be completed immediately and a positive statement of policy and program announced by August 1st would be most desirable and is hereby requested.

The foregoing petition is presented by the American Sugar Cane League on behalf of the sugarcane growers of Louisiana.

Respectfully submitted,
J. J. SHAFFER, JR., *Cane Grower*
First Vice President
American Sugar Cane League.

Official Release

(Mainland Wage Rate for Production and Cultivation of Sugarcane)

Determination of Fair and Reasonable Wage Rates for Persons Employed in the Production and Cultivation of Sugarcane in the Mainland Cane Sugar Area During the Calendar Year 1943

Pursuant to section 301 (b) of the Sugar Act of 1937, as amended, and Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

Fair and reasonable wage rates for persons employed in the production and cultivation of sugarcane in the mainland cane sugar area durng the calendar year 1943. The requirements of section 301 (b) of the Sugar Act of 1937, as amended, shall be deemed to have been met with respect to the production and cultivation of sugarcane in the mainland cane sugar area during the period from January 1, 1943, to December 31, 1943, if all persons employed on the farm during that period in the production and cultivation of sugarcane shall have been paid in full for all such work and shall have been paid wages in cash therefor at rates not less than the following:

(a) ON A TIME BASIS

Class of work	Louisiana		Florida	
	Per day of 9 hours	For a working day longer or shorter than 9 hours, rate per hour	Per day of 9 hours	For a working day longer or shorter than 9 hours, rate per hour
(1) For all work except as specified under (2):		Cents		Cents
Adult males	$1.75	20.0	$2.30	26.0
Adult females	1.50	17.0	1.95	22.0
(2) Specialized operations:				
Tractor drivers	2.15	24.0	2.65	30.0
Teamsters	1.75	20.0	-------	---------
	Per day of 8 hours	For a working day shorter than 8 hours rate per hour	Per day of 8 hours	For a working day shorter than 8 hours rate per hour
(3) Children between 14 and 16 years (maximum employment for such children is 8 hours per day)	$1.30	Cents 17.0	$1.75	Cents 22.0

(b) ON A PIECE-RATE BASIS

(1) For all classes of work	If work is performed on any piece-rate basis the earnings per hour or per day shall be not less than the applicable rates per hour or per day specified above for adult male or adult female workers, or children between the ages of 14 and 16 years.

(c) *Provided, however*:

(1) That for work performed in the production and cultivation of sugarcane between January 1, 1943, and the date of issuance of this determination, payment in full of the rates determined for similar work for the calendar year 1942 (S. D. No. 124, issued February 16, 1942), or the rates agreed upon between the producer and the labor, whichever was higher, will constitute compliance with the requirements of section 301 (b) of the said Act with respect to such work;

(2) That if the producer and the laborer agree upon a wage rate for any class of work higher than that prescribed herein, payment in full of the amount agreed upon must be made to qualify the producer for payment;

(3) That the producer shall furnish to the laborer, without charge, the customary perquisites, such as a habitable house, a suitable garden plot with facilities for its cultivation, pasturage for livestock, medical attention, and similar incidentals; and

(4) That the producer shall not, through any subterfuge or device whatsoever, reduce the wage rates to laborers below those determined above.

Done at Washington, D. C., this 29th day of May 1943.

(SEAL) CHESTER C. DAVIS,
War Food Administrator.

Rent

The following question has been submitted:

"Can a landlord increase the rent paid by the tenant? If so, what per cent can he increase it under the AAA program?"

The answer is contained in the sugar determination on proportionate shares which appeared in the *Sugar Bulletin* of July 1st on page 170. No increase over the 1942 leasing agreement is permitted for the landlord.

C. J. B.

The Fertilizer Situation

We are advised by the Nitrogen Unit of the War Production Board that approximately 15,000 tons of Cyanamid will be available for the 1943-44 Louisiana sugarcane crop. We are also advised that only small quantities of Sodium Nitrate or Ammonium Sulphate will be available except for the use of the mixers in making mixed fertilizer.

The twenty parishes producing sugarcane for sugar have used the following amounts of fertilizer during the past six years. All of this fertilizer has not been used under sugarcane because it represents the total fertilizer used in these parishes for all crops:

TONS

	1938	1939	1940	1941	1942	1943
Cyanamid	11,693	11,153	11,208	13,489	6,568	12,508
Sodium Nitrate	6,993	5,359	7,394	6,401	9,841	10,524
Ammonium Sulphate	2,901	3,362	1,496	745	5,156	2,775
Calcium Nitrate	1,229	390	0	0	0	0
Mixed and Other	21,321	18,177	17,954	17,802	23,317	21,833
Total Tons	44,137	38,441	38,052	38,437	44,882	50,640

We have addressed the following letter to the large distributors of fertilizer in the sugarcane belt:

New Orleans, August 5, 1943

Swift & Company Fertilizer Works
1711 Masonic Temple
New Orleans, Louisiana
Armour Fertilizer Works
Carondelet Building
New Orleans, Louisiana
Davison Chemical Company
401 1st Street
Gretna, Louisiana
Louisiana Agricultural Cooperative, Inc.
P. O. Box 949
Baton Rouge, Louisiana
Kelley, Weber & Company, Inc.
Lake Charles, Louisiana

Gentlemen:

We are advised by the Nitrogen Unit of the War Production Board that approximately 15,000 tons of Cyanamid will be available for the 1943-44 Louisiana sugarcane crop. We are also advised that only small quantities of Sodium Nitrate or Ammonium Sulphate will be available except for the use of the mixers in making mixed fertilizers.

We are however assured of the availability of some ten thousand tons of Ammonium Nitrate if we are willing to accept delivery during the six months from September to February. To circumvent the tendency to cake the TVA has developed a process wherein the Ammonium Nitrate is put up in pellet form and each pellet is wax coated.

The distributors must secure their Ammonium Nitrate (32½ per cent nitrogen or twice the nitrogen content of Sodium Nitrate) from:

Mr. N. H. Eason
Cooperative Distribution Representative
Agricultural Relations Department
Tennessee Valley Authority
Knoxville, Tennessee

Each grower is to secure his requirements from his regular dealer or distributor who secures his requirements from the above mentioned Government agency.

The sugarcane growers should place their orders immediately and must agree to accept delivery during September, October, November, December, January, and February.

If we avail ourselves of this opportunity we should be able to meet our sugar fertilizer requirements for the 1944 sugarcane crop.

We trust that the distributors will cooperate in this and assist the sugarcane grower in securing his fertilizer requirements.

We will appreciate an acknowledgment and an expression of your willingness to help. Should there be any suggestions you would like to make in regard to the handling of these matters, we will be glad to pass the information on to our members.

Very truly yours,
(Signed) Marcel J. Voorhies
General Manager

It appears that we will have to replace most of the Sodium Nitrate and Ammonium Sulphate with Ammonium Nitrate. It will require only five tons of Ammonium Nitrate to replace ten tons of Sodium Nitrate. It will require only six and a quarter tons of Ammonium Nitrate to replace ten tons of Ammonium Sulphate or Cyanamid.

We think it is very urgent that you determine your fertilizer needs immediately and if you are not able to meet them with the Cyanamid which is available, you should immediately place your order with your dealer for Ammonium Nitrate and be prepared to take delivery for the months specified in the letter. We must bear in mind that the Ammonium Nitrate is manufactured currently and must be taken from the manufacturer as it is produced. If that does not happen then the fertilizer will not be manufactured and we will not be able to secure our fertilizer needs.

Southern Farm Bureau Training School

An impressive battery of distinguished figures in the national as well as agricultural life will appear on the program of the annual Southern Farm Bureau Training School, to be held in Monroe, La., August 17 to 19, inclusive. Fifteen southern states will be represented at the gathering, which will include presidents, secretaries and other leaders of Farm Bureau activities in the south. It will be the first time the training school has ever been held in Louisiana.

Topping the list of speakers will be Governor Sam H. Jones of Louisiana; Edward A. O'Neal, president of the American Farm Bureau Federation, and U. S. Senator Allen J. Ellender. Others will include presidents of Farm Bureaus in several of the Southern states. The training school will open Tuesday, August 17, with the registration of delegates at 7 p.m. Following a get together and fellowship hour, a business session of presidents and secretaries will be held at 8:30 o'clock. Headquarters of the gathering will be at the Hotel Frances.

On Wednesday, August 18, Mayor H. L. Benoit, of Monroe will deliver an address of welcome. At this session Governor Jones and President O'Neal will be the speakers, R. N. Amacker, president of the Louisiana Farm Bureau Federation; H. L. Wingate, Georgia, and J. F. Porter, Tennessee, will be on the program. The afternoon will be devoted to conferences on membership acquisition, maintenance and organization. Owen Cooper, Mississippi, will preside.

Donald Kirkpatrick, general counsel of the American Farm Bureau Federation, will be the chief speaker at the night session, when J. E. Winslow will preside.

Woman's place in the Farm Bureau organization will be discussed Thursday morning by Mrs. Elsie W. Mies and Mrs. Charles W. Sewell, of the Associated Women's division of the American Farm Bureau Federation. Others on the program will be J. E. Stanford, Kentucky; Walter Randolph, Alabama, and R. E. Short, Ark.

In the afternoon President O'Neal will conduct a panel discussion of various phases of farming activities. President O'Neal will also preside at a night banquet, when Senator Ellender will be the chief speaker. A dance will bring the three-day gathering to a close.

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A Comparison of C.P. 29-120 with Co. 281

(*By E. C. Simon, Associate Agronomist, Louisiana Sugar Expt. Station*)

In the opinion of the writer the sugarcane variety C.P. 29-120 is perhaps the most underrated commercial sugarcane now grown in Louisiana and for that reason he will in this paper try to point out some of its merits.

It is true that the variety does not have an attractive growth habit, nor does it shuck easily when harvested by hand. However, yields of both plant and stubble cane throughout those areas of the State where the variety has shown adaptability are relatively good, particularly in comparison with Co. 281. The sucrose content has also been satisfactory in most areas with the exception of some of the more northern areas of the sugar district on the more fertile soil types where in some years the sucrose analyses of the plant cane have been just under par. Reports from those who have harvested the variety mechanically indicate that it can be so harvested satisfactorily.

One of the factors necessary for a successful grinding season under Louisiana conditions is the planting of a sufficient acreage of satisfactory windrowing varieties, adaptable to the section of the State where grown, to be used as cold insurance during the latter portion of the grinding season. The standard windrowing variety in the Mississippi River and Red River sections has been Co. 281; some reliance being placed on C.P. 29-320 and other varieties as secondary windrowing canes to be used in an emergency.

Much effort has been expended both by the U.S.D.A. and the Louisiana Sugar Experiment Station to secure a variety or varieties which could be used to replace Co. 281 either wholly or in part. While several varieties have been found which possess in a similar degree the genetic factors responsible for little inversion of sucrose in windrowed sugarcane, with the exception of C.P. 34-120 none of these varieties have been considered strong enough field canes to be released.

While a great deal of stress should necessarily be placed on finding varieties which will lose but little of their sucrose through inversion when windrowed for the factory, the fact should never be lost sight of that cold resistance of the tissues is equally as important a factor. It is extremely important under the conditions of severe cold weather which sometimes occur, as an example, during the 1940-41 grinding reason.

Work of the Louisiana Sugar Experiment Station shows that both C.P. 29-103 and C.P. 29-120 have kept in a relatively sound physical condition standing in the field under weather conditions conducive to the rapid physical breakdown of the tissues of varieties such as Co. 281.

A great deal of work on windrowing has been done both by Dr. J. L. Lauritzen and his associates at the U.S.D.A. station, Houma, Louisiana, and by the Louisiana Sugar Experiment Station. This work shows C.P. 29-120 to be relatively satisfactory windrowing cane, and although under adverse warm weather conditions the variety has shown more sucrose loss through inversion when windrowed than has Co. 281, it has held its sucrose content sufficiently well to justify its use as a windrowing variety.

In comparing the cold resistance of the two varieties the writer refers back to our 1940-41 crop. It will be remembered that during that season we experienced severe early freezes. At the Louisiana Sugar Experiment Station on November 15 the temperature went down to 23° F. with a period of cold intensity lasting nine hours. All buds and eyes were killed on standing sugarcane and stalks were water-soaked through and through. Occasional cold splits were found in some exposed places.

This degree and intensity of cold placed many varieties in a dangerous category and only those varieties possessing sufficient cold resistance subsequently gave satisfactory millable sugarcane. Under the conditions obtaining, a large drop in Brix and consequently sucrose occurred, while the purity varied but little, this occurred within two weeks after the stalks were killed. Varieties which prior to the freeze were giving juice analyses of par quality dropped down to little better than salvage quality. Specifically Co. 281 under the weather conditions obtaining did not hold up satisfactorily either as standing or windrowed cane, and even by judicious topping could not be brought up to sugarcane of standard quality nor could the acidity in terms of N/10 NaOH be reduced to a satisfactory level. An anomaly was found to exist, the standing cane of Co. 281 apparently held up equally as well, if not better, than did the windrowed although neither were satisfactory.

Regarding C.P. 29-120, this variety by judicious topping gave not only sugarcane with juice analyses near to standard quality, but the acidity in terms of N/10 NaOH was not greatly above that of the normal.

Summing up our data, we have found that Co. 281 is the better windrowing variety from the standpoint of loss of sucrose through inversion provided that the variety is windrowed in a sound physical condition. C.P. 29-120 has windrowed satisfactorily and has lost more sucrose from inversion while in the windrow than has Co. 281 under weather conditions not conducive to the keeping of windrowed cane. However, the cold resistance possessed by C.P. 29-120 under severe weather conditions such as occurred during the 1940-41 grinding season has enabled the variety to keep better in the windrow under such conditions than has Co. 281.

The combination of characteristics possessed by C.P. 29-120, namely, fairly good windrowing qualities and cold resistance, strengthens its position materially when compared with Co. 281. They offer the alternatives of either harvesting the variety as standing cane or in the event of severe freezes windrowing it should windrowing become necessary.

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THE SUGAR BULLETIN

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Price Assistance for 1943 and 1944 Crop Announced by War Food Administration

By C. J. Bourg

The War Food Administration announced on August 28th the adoption of "a program designed to assist Louisiana sugarcane growers in maintaining production at a high level in the continental area during 1943 and 1944."

By providing incentives for a maximum production of Louisiana sugar in 1943 and in 1944, the War Food Administration has in one decision complimented and challenged the Louisiana sugar industry. It has now become the duty and should be the purpose of sugarcane growers to accept both the compliment and the challenge, by reaching the firm determination to come through in each year with production records to which Louisiana growers of the present and in the future may always point with pride. The production of Louisiana sugar during the War Years of 1942, 1943, and 1944 must be written in figures of accomplishment so impressive that Louisiana's place in the agricultural and industrial life of this Nation shall be unquestioned hereafter,—come Peace or War!

The War Food Administration program provides for an average increased return to growers for the crop to be harvested during the 1943 season, of approximately $.34 per ton of sugarcane (assuming an average extraction of 170 pounds of sugar per ton of cane) as the payment will be $.20 per 100 pounds of raw sugar recovered. The WFA has declared that since this sugarcane was planted a year ago, and in the case of stubble, two or three years ago, a portion of the cost of growing the present crop was incurred prior to the current year; however, harvesting costs are still to be incurred, and the increased returns to growers under the WFA program will assist them in meeting increased costs, chiefly for labor. The total return for sugarcane in 1943 should amount to an average of about $5.75 per ton.

The incentive payment is to be made to growers at the time of settlement for sugarcane through contracts between the Commodity Credit Corporation and sugarcane processors. Thus the grower will actually receive a higher price for his sugarcane at the time of settlement by the factory.

The 1944 program, also implemented by a Commodity Credit Corporation contract with processors, provides for an average increase of about $.85 per ton of sugarcane above the prices which were paid for the 1942 crop (assuming an average extraction of 170 pounds of sugar per ton of cane) as payment will be $.50 per 100 pounds of raw sugar recovered. In effect, should the present price of raw sugar be maintained through the 1944 marketing season, the price assistance of approximately $.85 per ton of sugarcane on the 1944 crop and $.34 on the 1943 crop will be absorbed by the Commodity Credit Corporation. The total return for sugarcane in 1944 should amount to an average of about $6.25 per ton.

Each grower of sugarcane, who right at this time is planting or about to plant seed for the 1944 crop, and making plans for harvesting the 1943 crop, is

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The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
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called upon to tighten his belt and to make up his mind to plant to the limit, so that his Country may get all of the sugar which he can produce as part of the War Food Program. The WFA, speaking for the United States Government, has substantially sent a message to the Louisiana growers to this effect:

"Your Country wants you to plant a full acreage in sugarcane. Our people need sugar in the United States. To show you that we mean business, we will pay you an extra $.34 per ton this year to assist you to harvest every stalk of sugarcane, so that with this support payment you can meet your increased costs and still not lose money. Moreover, we also agree,—this far ahead of time,—to pay you an extra $.85 per ton in 1944, so you will have the advance assurance that your sugarcane next year will bring an additional $.50 per ton over 1942. Your Government is depending upon you, Mr. Louisiana Sugarcane Gower, for more sugar on the production line at the home front, in the same manner as it is depending upon your sons and brothers on the battle line at fronts all over the World."

The American Sugar Cane League is justly proud of the prominent part it took in presenting the facts about Louisiana conditions, on which facts the above action was taken by WFA. The obligation of the League to its grower members having been performed successfully, it now becomes the obligation of the League members to be stimulated to maximum performance in planted acreage. Let us repeat here the appeal made by Mr. Shaffer in submitting the petition of the American Sugar Cane League to WFA, to remind each sugarcane grower of the response that the WFA is justified in expecting from you.

"Farmers plan on the basis of their experience and of existing conditions. The planting of sugarcane in Louisiana is done in August, through September and the early part of October. Thus, the planting of the 1944 crop will immediately precede the harvesting of the 1943 crop. The heart and mind of the sugarcane grower and therefore his decision regarding the acreage he will plant this Fall, will be guided necessarily by the outlook he has for harvesting his 1943 crop. If he is offered Government assistance in meeting added costs and in obtaining needed labor, he will be encouraged as to the harvest as well as to his planting. The two are inseparable, except to the extent that a farmer has reasons to feel that conditions which exist in the Fall of 1943 are likely to be improved, or aggravated, in the Fall of 1944. Unfortunately, in times of war it is hardly justifiable to expect an improvement with respect to either labor or costs from year to year, until the war is over. It is apparent that farmers cannot logically base their hopes or expectations upon improved conditions in 1944, particularly if current conditions indicate added 1943 harvest costs which will bring money losses, and labor shortages resulting in sugarcane and sugar losses. WFA can furnish the basis of encouragement and stimulated hope needed to give the 1943 harvest a brighter outlook and accordingly to encourage a full planting of sugarcane for 1944.

Elsewhere in this issue of the *Sugar Bulletin* is a report of the organized program of the American Sugar Cane League to assist growers in obtaining extra labor for harvesting the 1943 crop. In previous issues of the *Sugar Bulletin* reports have been given explaining the procedure by which a full supply of fertilizer can be obtained for the 1944 crop. Likewise in regard to farm machinery, the League has secured assurances that increased allocations will be made for the manufacture and distribution of farm implements needed to cultivate and harvest the sugarcane. By its foresight and by vigorous presentation of the needs and requirements of the Louisiana sugarcane grower and processor, the League has facilitated a maximum effort and has shown the way for service to the industry and to the Nation. Now, the American Sugar Cane League with confidence appeals for a united effort to fulfill its pledges of what the growers would do if assisted, and to meet the challenge of the War Food Administration in offering the needed assistance.

Food Production for the War--and Afterwards

Louisiana farmers were honored recently when Judge Marvin Jones, War Food Administrator, came to address the Farm Bureau Southern Region Training School at Monroe. Judge Jones is well-known to sugarcane growers as the co-author of the Jones-Costigan Act of 1934 and the Jones-Brown Act of 1937. As War Food Administrator, the Judge has brought to the Administration his widely known and much appreciated ability to bring together conflicting views in farm legislation and the formulation of agricultural programs. It was typical of him to recognize in his address at Monroe that "The American farmer

has a war record to match that of his sons at the battle fronts."

Discussing production, Judge Jones declared:

"There will be no restriction on food production. All-out production is needed. We will undertake to assemble and furnish producers the information as to needed war crops. These will be broken down into states and counties so that the information will be as complete as possible. It will be a voluntary program. It will not be necessary to ask farmers to sign written contracts. They have already shown that they will respond without them. We hope to give them the information as to the needs well in advance of planting time. Then if we make available to them, in so far as it is possible to do so, the essential machinery, supplies, and labor, I have not the slightest doubt that they will respond as they always have in the time of the nation's crises."

Revealing his personal attitude and administrative policy, the Administrator explained his intentions frankly:

"I expect to consult Members of Congress, farmers and farm groups and to lay out problems before them and to seek their advice and their help. If a better way can be found, I am willing and anxious to have it. If after consultations, modifications are found to be desirable, we shall not hesitate to adopt them. I served more than 20 years in the House of Representatives and 10 years as the Chairman of the House Committee on Agriculture. During that period I worked with many representatives of farm groups. I value the counsel and advice of these men. I also value the counsel and advice of the farmers and livestock people who are producing our food supply. I expect to stay in close contact with these producers. No program can succeed without the support of the people throughout the country."

* * * * *

Congress is expected back in Washington September 13th, at which time decisions will have to be made with respect to farm policies in relation to inflation and the cost of living. This will be immediately considered in connection with the extension of the life of the Commodity Credit Corporation. Earlier this year, there was a very considerable fight with respect to the rolling back of prices for different food products of the farm, with the Government reimbursing farmers and processors by means of direct subsidies. The issue was never finally settled because Congress, before recessing for the summer, passed a temporary measure extending the life of the Commodity Credit Corporation for six months. In the meantime, Members of Congress have gone home and have had the opportunity to discuss these issues with the folks in their Districts and States. It is now expected that a compromise may be worked out whereby the Administration will yield reasonably on its price roll-back plan and the incentives offered farmers for the continuation of their praiseworthy record of food production will be on a voluntary basis. Any program to retard or prevent inflation is very desirable, provided that the interests of the farmer, the laborer and the consumer are safeguarded with uniformity of treatment. Up to the moment labor has been *l'enfant gate'* of the New Deal, which the farmers rightfully resent.

* * * * *

The Cuban crop of sugar for 1944 has been purchased by the United States Government. The full details have not been revealed but it is reported that four million tons have been purchased at the same price as last year, or $2.65 per hundred pounds of raw sugar f.o.b. Cuba. This basic price is intended to be the net return of the Cuban producer, with the United States Government assuming increased costs of freight, insurance and war risk. It is understood that valuable concessions have been granted the Cuban sugar industry in lieu of the $3.15 price they were demanding. Meanwhile the program of agricultural diversification, by which Cuba would become less dependent on the one-crop system (sugar) and more self-sufficient in food production, remains another "darn good idea" on paper. The sugar crop for 1944 in Cuba will be the largest in more than a decade.

Concerning molasses, it has been reported that the War Shipping Administration will assign a few tankers for molasses shipments from Cuba and Puerto Rico. In view of the grain shortage, there is a tendency to increase the use of molasses in the production of alcohol. The extent to which this program is developed will determine the volume of molasses that can be marketed in the United States. Again it is a question of shipping space. Home production needs no "bottoms" to reach the United States market.

Progress Report of the Labor Committee

The Labor Committee of the American Sugar Cane League composed of:

Frank L. Barker, Chairman
E. W. McNeil, Vice-Chairman
M. V. Yarbrough
L. A. Borne
J. J. Shaffer, Jr.
A. A. Thibaut
Howard J. Olivier
Dubourg Thibaut
Frank M. Bacque
Horace Nelson
Jules M. Burguieres
Charles A. Farwell

has been acutely conscious of the impending shortage of labor necessary to harvest what promises to be the second largest sugar cane crop in the history of the industry.

The committee cooperated with the Agricultural Extension Division and the County Agents and their parish farm labor advisory committee in a survey of Farm labor in the sugar area.

The committee cooperated with the War Manpower Commission in an industry survey of Factory labor.

On August 20th, the Labor Committee represented by Chairman Frank L. Barker, J. J. Shaffer, Jr., Charles A. Farwell, W. C. Kemper, president of the League and Marcel J. Voorhies, attended the labor conference called by the Hon. Sam H. Jones, Governor, at Thibodaux, Louisiana. Also in attendance were representatives of the War Industries located in this area, Extension Division, L. S. U., County Agents, and their parish farm labor advisory Committees, War Manpower Commission, Selective Service, Welfare and Unemployment Agencies. A clear picture of the impending farm labor shortage was presented by the Governor, and each agency expressed the degree of cooperation that it could extend.

The Agricultural Extension Division has been delegated by Congress as the Agency responsible for the training and recruiting of Farm Labor.

At the suggestion of the labor committee of the American Sugar Cane League, the Extension Division has established farm labor offices under the supervision of the County Agents and their parish farm labor advisory committee in each of the commercial sugarcane parishes. These offices are undertaking the determination of actual farm labor needs so that specific and definite information will be available in considering the various possible sources of needed farm labor. The Extension Division is cooperating closely with the Extension Divisions in our neighboring States, where harvesting labor is usually secured, and the League Committee is continuing in its cooperation with the Louisiana Extension Division.

Under the energetic leadership of Mr. Charles A. Farwell, who maintains all contracts with the armed forces with respect to farm labor requirements, strenuous efforts in cooperation with the Senators, Representatives, Agricultural Extension Division and the New Orleans Association of Commerce, are being directed to the clearing of all obstacles to the securing of war prisoners and the furloughing of colored troops quartered in this general area who may volunteer to assist in the harvesting of this bumper sugarcane crop.

The Committee is not overlooking any promising source of farm labor and in evaluating the various possible sources, has considered Jamaica, Honduras, The Bahamas, Puerto Rico and Mexico as well as native born Japanese (American Citizens certified by the Federal Bureau of Investigation) as possible sources.

Windrowing Qualities of C.P. 34-120 and Certain other Commercial Varieties of Sugarcane in Louisiana

(By John I. Lauritzen, Senior Physiologist, Division of Sugar Plant Investigations, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture)

Introduction

The relatively low yields of sugar per acre of Co. 281, as compared with the varieties now in commercial culture in Louisiana (3),[1] emphasize the desirability of finding a high-yielding variety of sugarcane that possesses the desired qualities of a windrowing cane. A satisfactory windrowing variety should possess not only the essential qualities of other good commercial canes, such as a straight stalk, disease resistance, and a capacity to produce high sucrose per acre, but, in addition, must have a high sucrose content of stalk and a high resistance to inversion of sucrose. Such a variety should be capable of maintaining a good physical condition and high sucrose content throughout the required period in the windrow.

The task of finding such a variety is beset with difficulties. Varieties (7) that are as highly resistant to inversion of sucrose as Co. 281 have been found. Some of these varieties are being further tested for windrowing qualities; others have been rejected as commercial canes because of their susceptibility to disease, low yield, and low sucrose content. Thus far a high sucrose and a high tonnage variety as resistant to inversion of sucrose as Co. 281 and possessing the required disease resistance rating has not been found. Up to the present time this standard of qualities has been too high for realization. However, hopes are high and prospects are good for exceeding the performance of Co. 281 by combining windrowing qualities with high yields of cane. C.P. 34/120, although not as resistant to inversion of sucrose as Co. 281, possesses about equal sucrose content and a much higher cane yielding capacity. The resistance to inversion of sucrose, the sucrose content, and the yield of cane of C.P. 34/120 are such that this variety will apparently yield more sucrose per acre after the necessary period in the windrow than will Co. 281. C.P. 34/120 is commercially resistant to red rot and root rot and, as stated when the variety was released for commercial culture (6), "had remained free of mosaic until this year (1942) when one diseased stool was found at Raceland. This offers no threat to successful cultivation of the variety." Although C.P. 34/120 is susceptible to chlorotic streak, this disease can be controlled by roguing (1, 6).

[1]See references at end of this paper.

Table 1.—Relative yields and loss of 96° sugar in varieties Co. 281 and C. P. 34/120 as related to storage in open shed[1]

Experiment number	Yield of 96° sugar per ton of cane		Loss of sugar per ton of cane		Weight loss	Yield of 96° sugar per acre calculated from yields of sugar per ton of cane after storage, and average yield of cane per acre at test field stations[3] during	
	Before storage	After storage[2]				1941	1942
	Pounds	Pounds	Pounds	Percent	Percent	Pounds	Pounds
CO. 281							
1	186.3	163.3	23.0	12.3	10.1	3,521	3,578
2	169.9	128.6	41.3	24.3	10.2	2,773	2,818
3	160.6	144.9	15.7	9.8	7.5	3,124	3,175
4	173.9	156.2	17.7	10.2	9.0	3,368	3,422
5	197.6	170.6	27.0	13.7	8.8	3,678	3,738
6	198.5	179.2	19.3	9.7	7.4	3,864	3,926
Average	181.1	157.2	24.0	13.3		3,388	3,443
C. P. 34/120							
1	182.9	139.9	43.0	23.5	9.8	4,232	4,189
2	183.8	140.1	43.7	23.8	9.2	4,238	4,195
3	176.6	131.5	45.1	25.5	6.4	3,978	3,937
4	179.1	148.1	31.0	17.3	8.6	4,480	4,434
5	208.4	172.7	35.7	17.1	8.8	5,224	5,171
6	189.6	177.0	12.6	6.6	7.1	5,354	5,299
Average	186.7	151.6	35.2	18.9		4,584	4,538

[1]Dates of conducting experiments and crop of cane used:
Experiment 1, Nov. 2 to Nov. 15, 1940, second year stubble
Experiment 2, Oct. 22 to Nov. 5, 1941, first year stubble
Experiment 3, Nov. 15 to Nov. 28, 1941, plant cane
Experiment 4, Oct. 21 to Nov. 4, 1942, first year stubble
Experiment 5, Nov. 10 to Nov. 24, 1942, plant cane
Experiment 6, Nov. 17 to Dec. 1, 1942, plant cane

[2]Yields corrected for weight loss that occured during storage.

[3]The cane yields used in calculating yields of sugar per acre were the average yields from field plots (**3, 5**) for Co. 281 for 1941 and 1942, respectively 21.56 and 21.91 tons per acre and for C. P. 34/120, 30.25 and 29.94 tons at Greenwood (Thibodaux), Godchaux (Raceland), Oaklawn (Franklin) ,Albania (Jeanerette), Leon J. Landry (New Iberia), Roland's Farm (Erath), Alma (Lakeland), and Rosewood (Hamberg) during 1941 and 1942, and at Stella (St. Martinville) during 1942.

Experimental Data

Six experiments were conducted during three harvesting seasons (1940, 1941, and 1942) in which samples of cane of varieties Co. 281 and C.P. 34/120 were stored in the shade in an open shed for about two weeks. In order to note the changes that occurred during storage, juice analyses of these samples were compared with those of comparable samples analyzed at the beginning of storage. The manner of selecting samples has been described in a former publication (7). The data obtained are summarized in table 1.

The yields of 96° sugar per ton of cane were calculated by a simplified method of calculation (2), based on the Winter-Carp-Geerligs formula. The sugar yields of both varieties were corrected for the weight loss that occurred during storage. A varietal

correction factor (4) was applied to the yields of sugar of C.P. 34/120 in samples analyzed before and after storage. The yields of 96° sugar per acre were calculated by multiplying the cane yield from field plots (see table 1) for 1941 and 1942 by the sucrose yields per ton of cane of stored samples. The juice analyses are presented in table 2.

During the harvesting season of 1942, the effects on inversion of sucrose by storing samples of five commercial varieties in the shade was compared with the effects of storing cane of the same varieties in the windrow (table 3). In case of each variety the stored cane was taken from the same pair of rows from

Table 2.—Juice analysis of check and stored samples, and weight loss of samples stored in the shade in six experiments

CO 281

Experiment number	Date of analysis	Duration of storage	Brix	Apparent sucrose	Apparent purity	Apparent purity drop	Weight loss	Juice extraction
	1940	**Days**	°	**Per cent**			**Per cent**	**Per cent**
1	Nov. 2	0	15.63	13.20	84.5			62
	Nov. 15	13	17.15	13.42	78.3	6.2	10.1	62
	1941							
	Oct. 22	0	15.36	12.36	80.5			60
2	Oct. 29	7	16.73	12.07	72.1	8.4	6.7	59
	Nov. 5	14	16.93	11.57	68.3	12.2	10.2	56
	Nov. 15	0	15.51	11.97	77.2			
3	Nov. 28	13	17.19	12.27	71.4	5.8	7.5	51
	1942							
	Oct. 21	0	15.79	12.67	80.2			65
4	Oct. 30	9	16.40	12.72	77.6	2.6	6.6	63
	Nov. 4	14	16.94	12.90	76.2	4.0	9.0	63
	Nov. 10	0	16.82	14.07	83.7			63
5	Nov. 24	14	17.95	13.91	77.5	6.2	8.8	62
	Nov. 17	0	16.82	14.11	83.9			62
6	Dec. 1	14	17.82	14.17	79.5	4.4	7.4	63
			C. P. 34/120					
	1940							
1	Nov. 2	0	16.51	13.47	81.6			61
	Nov. 15	13	18.05	12.60	69.8	11.8	9.8	59
	1941							
	Oct. 22	0	16.84	13.61	80.8			63
2	Oct. 29	7	18.05	12.49	69.2	11.6	5.7	56
	Nov. 5	14	18.55	12.70	68.5	12.3	9.2	55
	Nov. 15	0	17.12	13.35	78.0			
3	Nov. 28	13	18.44	12.02	65.2	12.8	6.4	52
	1942							
	Oct. 21	0	16.61	13.32	80.2			64
4	Oct. 30	9	17.30	12.69	73.4	6.8	5.6	60
	Nov. 4	14	17.76	12.84	72.3	7.9	8.6	61
	Nov. 10	0	17.74	15.04	84.8			57
5	Nov. 24	14	19.02	14.51	76.3	8.5	8.8	58
	Nov. 17	0	16.92	13.91	82.2			58
6	Dec. 1	14	18.50	14.41	77.9	4.3	7.1	62

which cane was windrowed. Four samples of each variety were selected by taking in succession one stalk for each sample and repeating this procedure until each sample had 20 stalks. The juice of two of these samples was analyzed immediately and that of the other two was analyzed after 14 days' storage in the shade. Seventy-five feet of two adjacent rows of each variety were windrowed. The windrows were divided into two sections of about equal length. A 30-stalk sample for analysis was taken from one end of each section at the time of windrowing and after intervals of time (table 3).

Because dry storage (storage in the shade) insures rather heavy loss of moisture, it is an effective method of differentiating varietal resistance to inversion of sucrose. Generally the loss of moisture and inversion of sucrose are far greater in dry storage than that which normally occurs in the windrow. The loss of moisture and of sucrose (table 1) are relatively high for Co. 281 and C.P. 34/120. In five of the six experiments the actual loss in pounds of sucrose per ton of cane after about two weeks' storage was greater in C.P. 34/120 than in Co. 281 and in six of the experiments the average loss in C.P. 34/120 was 11.2 pounds greater per ton of cane than in Co. 281 (table 1). The percentage loss was greater in C.P. 34/120 than in Co. 281 in four of the six experiments, and the average percentage loss was 5.6 higher in C.P. 34/120 than in Co. 281. However, in all experiments the yield of sucrose in pounds per acre in stored cane was markedly greater in case of C.P. 34/120 than in Co. 281. For example, the average yield of sucrose per acre of C.P. 34/120 was 1,196 pounds or 35 percent greater in 1941 (table 1), and 1,095 pounds, or about 32 percent greater in 1942 (table 1) than that of Co. 281. On the basis of these results, it would seem to be more profitable to grow C.P. 34/120 than Co. 281 for windrowing pur-

Table 3—Brix, apparent sucrose, apparent purity, and juice extraction in cane of certain varieties stored in an open shed and windrowed during the harvesting season of 1942.

Stored Cane

Variety	Date of analysis	Days in storage or windrow	Brix	Apparent sucrose	Apparent purity	Apparent purity drop	Weight loss	Juice extraction
	1942		°	**Per cent**			**Per cent**	**Per cent**
Co. 281	Nov. 17	0	16.82	14.11	83.9			62
	Dec. 1	14	17.82	14.17	79.5	4.4	7.4	63
	Nov. 17	0	16.92	13.91	82.2			58
C. P. 34/120	Dec. 1	14	18.50	14.41	77.9	4.3	7.1	62
	Nov. 17	0	18.47	15.71	85.1			59
C. P. 29/120	Dec. 1	14	19.40	14.05	72.4	12.7	5.8	61
	Nov. 17	0	17.89	15.52	86.8			61
C. P. 33/243	Dec. 1	14	19.15	12.16	63.5	23.3	7.9	63
	Nov. 17	0	19.17	15.98	83.4			59
C. P. 29/103	Dec. 1	14	19.65	11.79	60.0	23.4	5.0	61
			Windrowed Cane					
	Nov. 17	0	16.40	13.52	82.4			62
	Dec. 1	14	16.77	13.67	81.5	0.9		61
Co. 281	Dec. 15	28	17.53	14.14	80.7	1.7		56
	Dec. 29	42	17.03	13.52	79.4	3.0		58
	Nov. 17	0	17.02	13.84	81.3			60
	Dec. 1	14	17.57	14.00	79.7	1.6		58
C. P. 34/120	Dec. 15	28	17.84	14.35	80.4	0.9		67
	Dec. 29	42	17.66	14.09	79.8	1.5		57
	Nov. 17	0	17.97	15.03	83.6			60
C. P. 29/120	Dec. 1	14	18.79	15.22	81.0	2.6		60
	Dec. 15	28	18.51	14.78	79.8	3.8		60
	Nov. 17	0	17.73	15.24	86.0			60
C. P. 33/243	Dec. 1	14	18.36	14.79	80.6	5.4		60
	Dec. 15	28	18.44	14.79	80.2	5.8		59
	Nov. 17	0	18.95	15.60	82.3			57
C. P. 29/103	Dec. 1	14	19.79	14.32	72.4	9.9		56
	Dec. 15	28	19.48	13.65	70.1	12.2		54

poses, notwithstanding the greater loss of sucrose through inversion. During seasons when it would be necessary to windrow only small quantities of cane, the advantage in yield of sugar per acre of C.P. 34/120 would be even greater. For example, if the yield of sucrose per acre is calculated by using average yields of sucrose per ton of fresh cane of the six experiments (table 1) and the average tons of cane per acre obtained in field plots in 1941 and 1942 (Table 1), the yields of sucrose per acre for Co. 281 would be 3,905 pounds in 1941 and 3,968 pounds in 1942, and for C.P. 34/120, 5,648 pounds in 1941 and 5,590 pounds in 1942. The difference in yield of sucrose per acre in favor of C.P. 34/120 would be 1,743 pounds, or 45 percent, in 1941 (table 1) and 1,622 pounds, or 41 percent, in 1942 (table 1). Therefore, there would be a proportionate saving in all cane of these varieties not windrowed.

The windrowing *vs.* storage experiment,[2] as shown in table 3, deals with Co. 281 and the recently released commercial varieties C.P. 34/120, C.P. 29/120, C.P. 33/243, and C.P. 29/103.[3] The difference in

[2]The storage part of this experiment was experiment 6 of tables 1 and 2.

[3]C. P. 29/103 and C. P. 29/120 were released for commercial culture in the fall of 1939, C. P. 33/243 in the fall of 1941, and C. P. 34/120 in the fall of 1942.

the behavior of these varieties under the two sets of conditions was a matter of degree of inversion of sucrose—the greater amount of inversion of each variety occurring under dry storage. The contrast in the rate of inversion of sucrose between varieties followed the same order under the two sets of conditions. The performance of C.P. 34/120 was as good as, if not better than, Co. 281. Only in this one experiment of the six conducted under dry storage conditions was the performance of C.P. 34/120 as good as that of Co. 281 (tables 1 and 2). This behavior may have some relation to maturity, i.e., mature cane of all varieties is generally more resistant to inversion of sucrose than immature cane. In this experiment, cane of all the varieties was maturer than usual. C.P. 34/120 and C.P. 29/120 as well as Co. 281 behaved exceptionally well when windrowed. Because a high moisture content of the stalk inhibits inversion of sucrose, the relative damp condition of the cane throughout most of the period in the windrow would account for the difference in inversion in the windrowed cane as compared with that in dry storage. It should be kept in mind that such favorable conditions do not always prevail in the windrow, that greater losses may be expected under dryer conditions, and that greater losses may be expected in both C.P. 34/120 and C.P. 29/120 than in Co. 281. C.P. 29/120 ranks with Co. 290 in resistance to inversion and C.P. 34/120 between Co. 290 and Co. 281 (7). Results of these and of other tests with the other two varieties (C.P. 29/103 and C.P. 33/243) show that they should not be windrowed.

The results here presented show that C.P. 34/120 is slightly less resistant to inversion of sucrose than Co. 281. A greater loss of sucrose may be expected from C.P. 34/120 than from Co. 281 when windrowed under dry conditions. However, the yield of cane of C.P. 34/120 is sufficiently greater than that of Co. 281 so that C.P. 34/120 will yield much more sucrose on the acre basis than Co. 281 even when stored or windrowed under dry conditions. Moist conditions retard inversion of sucrose in all varieties. The results indicate that it would be profitable to substitute C.P. 34/120 for Co. 281 as a windrowing cane.

The behavior of C.P. 29/120 in these and previous experiments (7) was sufficiently satisfactory to permit its use as a windrowing cane in an emergency.

The results of the present experiments and those previously obtained clearly show that C.P. 29/103 and C.P. 33/243 are not windrowing canes. These varieties are very susceptible to inversion of sucrose and, therefore, should be milled promptly after cutting.

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Co. 290 and the Red Rot

(I. L. Forbes and C. B. Gouaux)

For the past several years poor stands have been observed in Co. 290 in a number of locations in the Sugar Belt. During March and again in May of 1943 the writers made a rather extensive survey over the sugarcane area of Louisiana to investigate the red rot problem. In the mixed and heavy soils of the western, Lafourche, and Mississippi River areas, poor stands of Co. 290 were found quite frequently. When seed pieces were dug up, split, and examined, they were found, in many instances, to be rotted throughout. Stands estimated at 25 to 85% were commonly observed. The plants found in the fields were those that came up early enough in the fall to make their own root systems, which enabled them to survive even though the seed piece rotted. When the second inspection was made in May it was gratifying to find that apparently none of the plants observed at the earlier date had died out. As far as known at present, red rot does not pass from the seed piece up into the shoots.

Not only is the soil type a contributing factor to the development of red rot in Co. 290, but soil preparation and drainage are also of paramount consideration. On the same soil types stands of Co. 290 were observed repeatedly to be better in well-prepared soils in fields in which the drainage was satisfactory. Such recognized good farming practices were without doubt very beneficial in reducing losses from such diseases as red rot, root rot, and stubble deterioration. At a time like this when labor is short, we feel that it is appropriate to remind cane growers of these pertinent facts. Excuses for being lax in applying the recommended and best farming practices are easy to find. But we need only recall some of the results of such practices during World War I. It is a recongized fact among personnel of the Sugar Experiment Station that one of the main reasons for the failure of the Louisiana Sugar Industry in the 1920's was the poor farming during and immediately after the war. Weakened varieties are more susceptible to such diseases as red rot and root rot. Let's not repeat these mistakes of World War I. Bettter a reduced acreage, better farmed, than an increased acreage, less labor, wishful thinking, and poor farming.

Planting recommendations for Co. 290.

1. Plant on lighter, better drained soils in those areas where poor stands have been encountered in the past.

2. Plant on well-prepared land, in rows that have been opened not more than a half day. *Do not plant Co. 290 in soil that is very dry,* as red rot develops severely in Co. 290 planted in dry soil, and don't cover with more than three inches of soil.

3. Plant September 15 to October 10. Not later.

4. Select for seed, where possible, cane that is free from borer damage and that has been rogued for mosaic.

5. Plant whole stalks, cutting only where seed pieces are extremely crooked. This will prevent much red rot infection through ends of seed pieces.

6. On Sharkey or other very heavy soils where stands have been poor in the past, plant C.P. 29-116, or some other red rot resistant variety.

Food at War

(By A. W. Dykers)

Food will win the War. This is an unanimous opinion of the experts in Washington. The following comments on the food situation have been gleaned from reports appearing in the press.

Ration Book #3

A new War Ration Book, this time No. 3, will go into use on September 12th for meats, fats, oils, cheeses, and canned milks. Anyone who has not already done so should apply immediately to his local ration board for this #3 book.

Stamps

When the final count was in it was found that more stamps were printed for War Ration Book No. 2 than were produced by the Government for postage during the twelve preceding years.

FIELD DAY SCHEDULE

The Annual SUGAR PLANTERS' FIELD DAY will be held at Louisiana State University, Baton Rouge, on SEPTEMBER 15th. All persons interested in the cultivation and processing of sugarcane are invited to attend the Field Day and take part in the activities. Tours of the experimental fields will be conducted by members of the Louisiana State Experiment Station staff during the forenoon, and the afternoon will be devoted to a program indoors.

4,000,000 Tons of Sugar

The Commodity Credit Corporation has agreed to purchase approximately four million tons of the coming Cuban sugar crop. The report is that the price to be paid for this large tonnage of sugar is not less than $2.65 for a hundred pounds f.o.b. Cuba. The Cuban crop is expected to produce about 4,200,000 tons of sugar, raw value, or which 225,000 tons will be used for local consumption on that island.

Exception Denied

The application of the American Sugar Cane League to the U. S. Department of Labor asking that Louisiana sorgo sugar processing operations be considered a seasonal industry and as such exempted from wage-hour overtime provisions, has been denied by the labor board.

15% Increase

The distribution of sugar in the United States during the first six months of 1943 amounted to 2,840,117 short tons, raw value, against 2,474,257 short tons in the first six months of last year. This is an increase thus far this year of approximately 15% over last year's distribution.

Potato Loan

The War Food Administration announced a revised loan and purchase program on August 24th that is designed to insure an even distribution of a record Irish potato crop of some 443 million bushels. Loans are to be made to growers and dealer association on potatoes in approved warehouses at the local support price which varies by grade and section from $1.70 to $2.55, (less 35 cents) per one hundred pounds.

Buy Bonds

The Third War Loan drive for funds to win the war will be launched on September 7th by the United States Treasury. The goal this time is fifteen billion dollars. This is a lot of money and everybody able to will have to do a little investing. So when the War Bond Man comes around be sure to do the best you can.

Any Questions?

In these times when there are so many things to know most of us are kept pretty dizzy trying to keep up with what is allowed and what is not allowed by the farming "regulations". Drop us a line if you are stumped. We *may* know the answer to your question but if we do not we probably know someone who knows someone who knows, and we can get your answer.

More Butter

The New York regional office of the War Food Administration reported on August 31st a departmental order from Washington announced that September military butter requirements had been reduced to 20 per cent, instead of the former 30, 40 and 50 per cent, and also anonunced that no butter need be set aside for military purposes in October. This was expected to result in an increase in the butter supply available for civilian consumption. The order applies to the entire country.

Control Onions

The War Food Administration has taken over control of virtually all of the nation's prospective supply of onions. This action was taken because of the greatly increased demand for this vegetable throughout the country. The control became effective on the last day of August.

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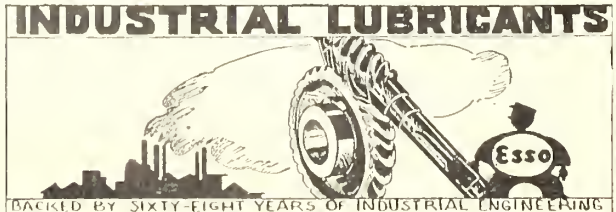

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THE SUGAR BULLETIN

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We stand for the encouragement of Home Industries as against foreign Competition

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Announcing The

TWENTY-FIRST ANNUAL MEETING

of the

AMERICAN SUGAR CANE LEAGUE

of the

U. S. A., Inc.

Thursday, September 30th, 1943

Jackson Room, Mezzanine Floor, St. Charles Hotel
New Orleans, La.
Meeting Convenes at 1:30 P. M.

At this meeting there will be an election of Officers and Members of the Executive Committee to serve during the ensuing year.

All Members of the League Will Please Consider This as an Official Notice To Attend

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Marcel J. Voorhies, Editor

Issued on the 1st and 15th of each month. Official Organ of the American Sugar Cane League of the U. S. A.
in which are consolidated
The Louisiana Sugar Planters' Assn.
The American Cane Growers' Assn.
The Producers & Mfrs. Protective Assn.
Subscription Price, 50 Cents per Year.

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Official Release

(1943 Harvesting Wages for Mainland Cane Laborers)*

The War Food Administration announced on September 8, 1943 the minimum wages to be paid laborers in Louisiana for the harvesting of sugarcane between September 1, 1943, and June 30, 1944, by producers who apply for payments under the Sugar Act of 1937. The basic harvesting wage rate, which is the rate for cutting cane applicable to adult male labor, has been increased from 21 cents per hour in the previous season to 30 cents per hour for the 1943 crop.

The increased rate will assist growers to obtain the workers needed to harvest the 1943 Louisiana cane crop, one of the largest in the State's history. A price assistance program for this crop was announced on August 28 providing for an average added return to growers above 1942 of about 33 cents per ton of cane.

The determination also provides, as in former years, that the producer is to furnish the laborer without charge the accessories customarily supplied to him, such as a habitable house and medical attention.

The Sugar Act requires—among other conditions of payment to producers—that all persons employed on farms in the production of sugarcane be paid in full for all such work at rates not less than those determined to be fair and reasonable after public hearing and investigation.

The wage determination follows:

TITLE 7—AGRICULTURE

CHAPTER VIII

WAR FOOD ADMINISTRATION

Part 802—Sugar Determinations

Determination of Fair and Reasonable Wage Rates for Persons Employed in the Harvesting of Sugarcane in Louisiana during the Period September 1, 1943, to June 30, 1944.

Pursuant to Section 301(b) of the Sugar Act of 1937, as amended, and Executive Order No. 9322, issued March 26, 1943, as amended by Executive Order No. 9334, issued April 19, 1943, the following determination is hereby issued:

Section 802.24m *Fair and reasonable wage rates for persons employed in the harvesting of sugarcane in Louisiana during the period September 1, 1943 to June 30, 1944.*

The requirements of Section 301(b) of the Sugar Act of 1937, as amended, shall be deemed to have been met with respect to the harvesting of sugarcane in Louisiana during the period from September 1, 1943 to June 30, 1944, if all persons employed on the farm during that period in the harvesting of sugarcane shall have been paid in full for all such work and shall have been paid wages in cash therefor at rates not less than the following.

(a) *Time rates for Adult Males and Adult Females*

	Per day of 9 hours	Per hour when working day is longer or shorter than 9 hours
		(cents)
(1) Cutting, topping, stripping		
(i) Adult Males	$2.70	30.0
(ii) Adult Females	2.20	25.0
(2) Loading	3.25	37.0
(3) Cutting and loading	2.90	33.0
(4) Tractor drivers and truck drivers	3.40	38.0
(5) Teamsters	3.20	36.0
(6) Hoist Operators	2.90	33.0
(7) Any other harvesting operations not connected with mechanical loading or mechanical harvesting:		
(i) Adult Males	2.30	26.0
(ii) Adult Females	1.85	21.0
Operations connected with mechanical loading or mechanical harvesting:		
(8) Operators of mechanical loading or harvesting equipment	3.65	41.0
(9) Grabmen, spotters, ropemen	3.25	37.0
(10) Pilers	2.90	33.0
(11) Scrappers	2.70	30.0
(12) Other operations connected with mechanical loading or mechanical harvesting	2.70	30.0

(b) *Time Rates for Harvesting Operations Performed by Children*

(1) For children between the ages of 14 and 16 years, the rate per day of 8 hours (maximum hours per day for such children) shall be not less than three-fourths of the rates established under paragraph (a) for adult male workers for a 9-hour day. For a working day shorter than 8 hours, the rate shall be in proportion.

(c) *Piece Rates for Adult Males, Adult Females, or Children 14 to 16 years*

(1) *Green sugarcane*

Variety of sugarcane	Cutting, topping & stripping	Loading	Cutting and loading as combined operation
C. O. 290; C. P. 29-103; C. P. 29-116; 31-291; 160; 103; 33-243	$1.17	$0.28	$1.45
All other varieties	1.35	.37	1.72

(2) *Burnt sugarcane*

Variety of sugarcane			
C. O. 290; C. P. 29-103; C. P. 29-116; 31-291; 160; 103; 33-243	.91	.28	1.19
All other varieties	1.00	.37	1.37

(3) The piece rate for a particular operation calculated on a basis other than prescribed under subparagraphs (1) and (2) of this paragraph (c) shall be such as to provide earnings per day, or per hour, of not less than the per day or per hour rates specified under paragraphs (a) or (b) above whichever is applicable.

(d) *General Provisions*

(1) Nothing in this determination shall be construed to mean that a producer may qualify for a payment under the Act who was not paid in full the amount agreed upon between the producer and laborer;

(2) The producer shall furnish to the laborer without charge the customary perquisites, such as a habitable house, medical attention, and other customary incidentals;

(3) The producer shall not, through any subterfuge or device whatsoever, reduce the wage rates to laborers below those determined herein.

(Sec. 301, 50 Stat. 909; 7 U. S. C. 1940 ed. 1131; E. O. 9322, 8 F. R. 3807; E. O. 9334, 8 F. R. 5423)

Issued this 6th day of September, 1943

/s/ Grover B. Hill

Acting War Food Administrator

Note The official release containing the harvesting wage rates for the 1942 crop appeared in the October 15, 1942 issue of THE SUGAR BULLETIN.*

The Present Situation with Respect to Chlorotic Streak in Louisiana

By E. V. Abbott, Pathologist, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.

Chlorotic streak has now been under observation in Louisiana for six years, and enough has been learned about the disease to permit an appraisal of its present and probable future importance to the sugarcane industry of the State.

In some respects the disease has not become as serious as there was reason to believe it might during the first year or two after it was discovered here. There has not been, for example, the "wildfire" spread that characterized mosaic when it was first introduced into the State. To some extent this is because of the slower rate of spread of chlorotic streak in our present commercial varieties as compared with the rate of spread of mosaic in the old Noble canes. Credit must also be given, however, to the growers who took energetic measures to control chlorotic streak when it was discovered on their properties. If this had not been done, the disease would undoubtedly have become much more widely disseminated than it is. It is now known to occur in all of the important sugar-producing parishes except Lafayette, St. Martin, St. Landry, and Pointe Coupee.

It is to be hoped that chlorotic streak will not show the rapid rate of spread such as has occurred with mosaic in the old native canes, or in Co. 281. However, during 1942 the disease spread considerably more rapidly than in any previous year since it has been under observation in Louisiana, infection in some varieties in the test plots exceeding 50 per cent in a single season in cane grown from hot-water treated seed. It is apparent, therefore, that the extent to which the disease develops in commercial fields in the future will depend a great deal on the growing of varieties that have some degree of resistance to it, as well as on the continued vigilance of growers in keeping it under control where it has become established. Several of the present commercial varieties are classed as susceptible to chlorotic streak, and yet they are very much more resistant to the disease than are some of the unreleased seedlings at the test fields, a few of which have shown 100 per cent infection in two years' exposure to the disease in the field. If such highly susceptible varieties were widely grown on a commercial scale, it is entirely possible that chlorotic streak would become as prevalent as mosaic is today, and since its effect on most varieties is more severe than that of mosaic, under such conditions it would become a more serious hazard to the industry than is mosaic.

Varietal Susceptibility

For the past four years field tests have been conducted for the purpose of determining the relative susceptibility to the disease of the commercial varieties and of promising unreleased varieties at the test fields. In these tests replicated plots of the varieties grown from hot-water-treated seed were bordered on the ends and sides with plots of chlorotic-streak-infected cane, thus providing heavy exposure to spread. On the basis of the results of these tests, supplemented by observations in test field and increase plantings of cane of the varieties, the following classification of varieties[1] as to susceptibility to infection by chlorotic streak has been made:

Resistant	Moderately susceptible	Susceptible	Very susceptible
		*C. P. 29/103	
*Co. 281	*C. P. 807	*C. P. 29/120	C. P. 32/206
*Co. 290	*C. P. 28/11	C. P. 29/137	C. P. 34/79
*C. P. 29/116	*C. P. 28/19	*C. P. 29/320	C. P. 36/19
C. P. 33/372	*C. P. 33/243	C. P. 31/509	C. P. 36/62
C. P. 33/409		*C. P. 33/310	C. P. 36/85
C. P. 34/21		C. P. 34/92	
C. P. 36/70		*C. P. 34/120	
		C. P. 34/139	
		C. P. 36/75	
		C. P. 36/191	

[1] Varieties marked with an * are grown commercially. Others have not been released.

The different groupings should indicate approximately the degree of difficulty that would be experienced in controlling the disease in the field. However, they do not necessarily indicate the extent of loss the disease might cause, for one variety that may be about equally susceptible to infection as another, may be much more severely affected after infection takes place. In C.P. 29/120, for example, the rate of spread is usually about the same as in C.P. 29/320, yet the former is much more severely stunted in growth than the latter, and germination of infected seed cane is much lower, as will be seen from the figures presented below.

Effect of the Disease on Yields

The results of experiments showing the marked reductions in yields of cane and sugar that occur when chlorotic streak diseased seed is planted in comparison with healthy seed, have been reported in previous issues of *The Sugar Bulletin*[2]. During 1942, an additional test with 6 varieties of cane was conducted on mixed land at Montegut. Six replications of healthy and 6 of diseased seed of each variety were planted, with the same number of sound eyes planted per plot of 1/300 acre in size. The results are presented in table 1.

As in previous tests, the disease caused greater reduction in germination and yield of C.P. 29/120 than of the other varieties tested. The smallest reductions were shown by C.P. 807. With all varieties, however, the loss from planting infected seed was such as to show the importance of maintaining seed supplies free or at least with a low percentage of infection of chlorotic streak.

Table 1. Effect of chlorotic streak on germination and yields of cane and sugar per acre of 6 varieties of sugarcane.

Variety	Germination			Tons of cane per acre			Pounds of sugar per acre		
	H[1]	C S[2]	Reduction by C S	H	C S	Reduction by C S	H	C S	Reduction by C S
	%	%	%			%			%
C. P. 807	33	24	27.3	24.8	19.6	21.0	4784	3765	21.3
C. P. 29/103	28	13	53.6	25.7	14.4	44.0	5146	2747	46.6
C. P. 29/120	22	9	59.1	19.8	8.8	55.5	4909	2258	54.0
C. P. 29/137	23	12	47.8	18.3	9.9	45.9	3715	1997	47.7
C. P. 29/320	22	15	31.8	18.9	12.2	34.8	4162	2645	36.4
C. P. 31/509	44	23	47.7	27.9	20.5	26.5	5699	4069	28.6

[1] H-Healthy seed cane.
[2] C S-Diseased seed cane.

Control of the Disease

If chlorotic streak has become so prevalent on a plantation that fields with less than 1 per cent infection are not available for use as seed, roguing is recommended as the most economical and practical means of controlling the disease. This method has continued to be effective in holding chlorotic streak in check in the present commercial varieties on plantations where it has become established. If infection exceeds 5 per cent in all fields of any variety on a plantation, roguing is not recommended. In such instances, it will be preferable to purchase disease-free seed from another plantation, or resort to hot water treatment of seed cane, if facilities are available.

Paper read at meeting of Louisiana Sugarcane Technologist Association of Houma, La., September 1, 1943.

[2] Abbot, E. V. Results of experiments with chlorotic streaks in 1940. Sugar Bulletin 19:60-61, 1941.
Abbot, E. V. Results of experiments with chlorotic streak in 1941. Sugar Bulletin 20:161-165, 1942.

Report on Research on Sugarcane-Insect Control by the Houma, La., Laboratory of the U. S. Bureau of Entomology and Plant Quarantine During 1942

(By J. W. Ingram, E. K. Bynum, Ralph Mathes, and T. E. Holloway)
U. S. Department of Agriculture
Agricultural Research Administration
*Bureau of Entomology and Plant Quarantine**

Work conducted by the Houma, La., Laboratory on the control of sugarcane insects may be divided into two classes. These are (1) investigations of methods that may give a permanent measure of control, such as introducing parasitic enemies from other countries and the use of resistant varieties, and (2) measures which must be practiced every year, such as applying insecticides, destroying overwintering insects, and roguing out insects. Findings on sugarcane-insect control in 1942 are summarized in this article.

The Sugarcane Borer (*Diatraea Saccharalis* (F.))

Resistant varieties of cane.—Resistant varieties have proved of prime importance in the control of diseases of sugarcane as well as of other crops. They have also been of value in the control of some species of insects. At Houma, the susceptibility to the sugarcane borer of seedling canes that have been bred by the Bureau of Plant Industry is determined, and information concerning comparative resistance of individual selections to borer injury, over a period of several years, is furnished the Division of Sugar Plant Investigations of the Bureau of Plant Industry, Soils and Agricultural Engineering for use in breeding varieties having borer resistance as well as disease resistance and other desirable characteristics (*3*). Four varieties that have consistently shown borer resistance for a period of 3 or 4 years were reported to the Division of Sugar Plant Investigations for breeding stock in 1941, and three such varieties were reported to that Division in 1942. Based on 11,800 seedling varieties examined for borer injury during the past 6 years, it was found that the varieties used as breeding stock which usually gave susceptible progeny were C.P. 1165, P.O.J. 2725, C.P. 28/9, and the majority of the sorghums. Varieties that gave resistant progeny were N.G. 251 and most of the Turkestan varieties. In a lattice-square experiment on borer resistance of 49 seedling varieties selected because of low borer infestation, 4 varieties had less than 5 percent of their joints bored and 12 had less than 10 percent of their joints bored, when the average percentage of the joints bored in the control variety Co. 281 was 44.4.

In laboratory tests, in which comparison was made between 4 susceptible and 6 resistant sugarcane varieties and corn, it was found that the rate of survival, the proportion developing to pupae, the size, and the reproductive capacity of borers reared on corn were much greater than of those reared on any of the 10 sugarcane varieties, and these figures averaged greater for borers reared on susceptible varieties than for those reared on resistant varieties. Borers reared on the susceptible variety Louisiana Purple had a one-third greater percentage of survival than those reared on a resistant variety, development to pupation was one-third greater, the average weight of 14-day-old borers was one and one-half times as much, and the average weight of pupae was 20 percent more. Borer survival and development were greater on young sorghum than on sugarcane.

Samples of cane from replicated variety test plots conducted by the Division of Sugar Plant Investigations at Houma, Oaklawn and Raceland, which are milled annually by that Division at the Houma Station, have been examined annually for borer injury. Results of these examinations to date are given in table 1. It may be seen from this table that some commercial varieties suffer heavier borer injury than others, and that some of the unreleased varieties probably would suffer heavy borer injury whereas others probably would suffer comparatively light in-

jury, if they were released for commercial growing. Data obtained up to the present time show that some varieties vary in loss in weight and sucrose from equal percentages of joints bored.

Parasites.—Introduction of new parasites has proved so effective in controlling many other insect pests, and in controlling the sugarcane borer in other countries, that the introduction and breeding of borer parasites is being continued. The United States Department of Agriculture maintains men in South America searching for parasites of insects causing heavy damage in the United States. These men have sent borer parasites to Louisiana and are continuing the search for such parasites as may prove beneficial in Louisiana, Florida, and other borer-infested States.

In 1942 the Amazon fly (*Metagonistylum minense* (Towns.)), which has proved beneficial as a parasite of the sugarcane borer larva in the West Indies and South America, was bred and released in five locations in Louisiana. Breeding stock of these parasites was also sent to Florida for use in breeding flies for release for borer control in the Everglades sugar section.

A total of 1,500 *Macrocentrus gifuensis* (Ashm.), a parasite wasp that attacks the larva of the European corn borer, was received from the Bureau Laboratory at Moorestown, N. J., and released in a Louisiana sugarcane field. Whether or not it will become established, however, remains to be seen.

Two shipments of *Lixophaga diatraeae* (Towns.), a parasite of the sugarcane borer in the West Indies, were received from L. C. Scaramuzza in Cuba in the spring of 1943, and will be used in breeding good numbers of this parasite for release in Louisiana sugarcane fields. It has proved of much value in controlling the borer in the Fellsmere, Fla., area.

Introduced borer parasites (*Paratheresia claripalpis* V.d.W. and *Bassus stigmaterus* Cress.), released several years previously, were recovered in 1942 and 1943, indicating that they are able to survive under Louisiana conditions and giving hope that they may multiply to a point where they will be a factor in borer control.

Overwintering borers.—It was found, through extensive searches made for borers overwintering in various materials, that the number of borers surviving the winter of 1942-93 was much greater than the number surviving the previous winter. Examinations were made in adjacent hand-harvested and machine-harvested fields of the same variety to determine what effect machine harvesting would have on the amount of millable cane left in the field at harvesttime in which borers might hibernate. It was found that under the harvesting conditions of 1942 in 13 pairs of fields, an average of 1,488 pounds of millable cane per acre was left in the fields harvested by machines and an average of 891 pounds of millable cane per acre in fields harvested by hand labor. As much as 3,000 pounds of millable cane per acre, however, were left in some fields that were machine-harvested. These results further show the desirability of more thorough scrapping behind loaders to decrease the number of borers overwintering, if the labor supply permits. In previous experiments the value of the millable cane obtained by scrapping exceeded the cost of the operation. Thus scrapping following harvesting can be depended on to give a good decrease in borers surviving the winter for spring infestation, at little or no cost.

Under the winter conditions of 1942-43 many more borers survived the winter in burned uncovered cane trash than survived in burned trash that was covered by late January or early February plowing.

Experiments showed that the best method of controlling the large numbers of borers overwintering in cane planted the previous summer was cutting the shoots with a stubble shaver after the most severe part of the winter was over, and then burning the shoots. Practically all borers were removed by shaving at or just below the soil surface.

Roguing out dead hearts.—A 30-acre field and a 70-acre field rogued of dead hearts of first-generation borers gave a harvesttime control of 35 percent. A 1.1-acre rogued field did not give any harvesttime control. The average number of borer larvae removed per acre by roguing in 1942 was 597 and the average cost per acre was $2.94, although the infestation was so heavy on one field that the cost of roguing was $4.11 per acre. Experiments conducted in 1942, coupled with results in previous years, showed that fields should be rogued three times at about 10-days intervals to obtain best results by removal of first-generation borers in this way. Experiments over a period of several years have shown that with an average or below-average infestation about equally as good control was obtained from roguing as from dusting with cryolite. When labor again becomes more plentiful, roguing should prove a valuable supplement to dusting with cryolite as a borer control. The more heavily infested areas on a plantation can be dusted, and the more lightly infested areas rogued.

Control by dusting with cryolite.—Experiments, conducted jointly with entomologists of the Louisiana Experiment Station since 1937, showed that a good degree of borer control can be obtained by dusting with cryolite for either first- or second-generation borers (*1*)(*2*). Recommendations covering this method of control were drawn up jointly with the Louisiana Experiment Station and published in the March 1, 1943, issue of the *Sugar Bulletin.*

Large-acreage experiments on Reserve, Cypremort, Oaklawn, and Little Texas Plantations were conducted jointly with the Louisiana Experiment Station in 1942, but since these experiments were the cooperative work of both stations, the results obtained will be published jointly in a later issue in the *Sugar Bulletin.* Results of airplane dusting experiments conducted by the Houma Laboratory were published in the June 1, 1943, issue of the *Sugar Bulletin.* It was found that airplane dusting was at least equally as effective as ground dusting for second-generation borer control.

In small-plot experiments conducted on first-generation borers at Houma, it was found that dusting in the evening after dew had fallen was almost equally as effective as dusting while the dew was on in the morning, but dusting after the dew had dried in the morning was about 7 percent less effective than dusting while dew was on the plants. A number of dilutions of synthetic and natural cryolite were tested, but none was sufficiently more satisfactory than straight cryolite to warrant its use without further testing. Semiconcentrated synthetic cryolite spray applied at 10-day and 2-week intervals was not so effective in control as the dust applied at weekly intervals. Various new insecticides were tested on first-generation borers in the spring, and in the fall on borers in small cane planted the previous summer. None of these new insecticides proved as effective as cryolite in borer control.

was
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Once this was a farm in Russia, Poland... or maybe it was France. What difference does it make, where it was? The Nazis came... and now there is nothing but scorched earth and the stench of battle. Gone, too, are the happy voices of free people. It will be a long time before they return.

The farmers of the Southwest have rallied to the task of feeding and clothing the people who still fight for democracy with real American vengeance. From the Southwest are going food, fiber and materials in convoy lots! As long as these convoys keep pouring to the fighting fronts, there will be no scorched earth in America!

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In small-plot experiments on second-generation borers, straight synthetic cryolite gave better control than any of the dilutions tested, and applications of synthetic cryolite after dew had dried on the plants was less effective than applications made while the plants were wet with dew. In 34 acres dusted by ground machines on Waterford Plantation to control second-generation borers, the harvesttime infestation was about half that usually occurring in that area. Fairly good control was obtained on Little Texas Plantation by dusting seed-cane plots with a ground machine. On Clovelly Plantation an immediate control of 72 percent and a harvesttime control of 25 percent was apparent from dusting a 4-arce plot by hand gun from mule back for second-generation borer control.

The Sugarcane Beetle (*Euetheola Rugiceps* (Lec.))

Sugarcane beetle injury continued to be light in 1942 and 1943, and since there is only one generation of beetles a year, there is little likelihood of this insect multiplying to large enough numbers to cause serious damage in 1944. A wasp parasite, *Campsomeris dorsata* (F.), which attacks a closely related beetle in Puerto Rico was introduced from that country and released in the Franklin area in 1934. In April 1943 a total of 34 larvae and 33 adults of a predacious beetle, *Pyrophorus luminosus* (Ill.), which feeds on white grubs and related beetle larvae in Puerto Rico were also released in the Franklin area with the hope that they would aid in controlling the beetle. This shipment was sent to the Houma Laboratory by W. D. Wylie of Florida, who had previously received them from Puerto Rico.

Miscellaneous Sugarcane Insects

Experiments on insect transfer of the chlorotic streak disease were continued in cooperation with E. V. Abbott of the Division of Sugar Plant Investigations. Observations were continued on insect vectors of chlorotic streak and mosaic diseases.

As no West Indian sugarcane mites (*Tarsonemus bancrofti* Michael) were found in the small area in southern Florida where eradication was attempted, there is hope that this pest may have been eradicated from the continental United States.

There was small insect damage to the large crop of sorghum planted in the Louisiana sugar section in 1942. The corn leaf aphid (*Aphis maidis* Fitch) was sometimes so abundant that the sorghum panicles did not develop grain, and green stinkburgs were also observed sucking the glumes. There was little borer injury to sorghum prior to September, but fairly heavy top injury to late sorghum occurred during that month. In an experiment on Georgia Plantation 74 percent of the stalks and 15 percent of the joints were bored.

Annual surveys are made of commercial and experimental sugarcane plantings in Mississippi, Alabama, Georgia, and Florida. Searches are made for new pests and the status of pests known to be present is determined. Since sugarcane insect pests occur in some areas that are not found in others, responsible State or Federal authorities should be consulted before introducing sugarcane into Louisiana or shipping it from this State.

*Thanks are due W. E. Haley and L. J. Charpentier of the Houma Laboratory for their valued assistance in investigations covered by this article.

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(3) Mathes, Ralph, and J. W. Ingram. 1942. Development and use of sugarcane varieties resistant to the sugarcane borer, Journal of Economic Entomology, Vol. 35, No. 5, pp. 638-642.

TABLE 1—Comparative susceptibility to the sugarcane borer of commercial varieties and of the most promising unreleased varieties of sugarcane as determined from percentages of joint bored.

Variety	Years tested	Total number of samples examined	Total number of stalks examined	Susceptibility rating (Co. 281-100)
Commercial Varieties				
Co. 281	1936-42 inc.	281	5188	100
Co. 290	1936-42 inc.	276	5123	73
C. P. 28/11	1936-40 inc.	203	3825	90
C. P. 28/19	1936-42 inc.	275	5125	83
C. P 29/103	1936-37-40-41-42	170	3137	135
C. P. 29/116	1936-42 inc.	239	4300	119
C. P. 29/120	1936-37-38-40-41-42	167	3222	82
C. P. 29/320	1936-42 inc.	279	5138	94
C. P. 34/120	1940-42	27	448	86
C. P. 33/243	1939-42 inc.	60	1066	117
Promising new varieties potentially suitable for release to growers				
C. P. 29/99	1938-39	23	305	128
" 29/137	1938-41 inc.	65	1144	116
" 31/509	1938-42 inc.	99	1687	84
" 31/529	1940-42 inc.	24	399	94
" 31/551	1942	4	51	124
" 32/202	1938-40 inc.	56	935	76
" 32/206	1939-42 inc.	60	1060	81
" 32/134	1939-40	18	330	93
" 32/324	1939-41	27	540	128
" 33/224	1939-42 inc.	33	581	136
" 33/233	1940-41	11	210	189
" 33/253	1939-41 inc.	36	691	73
" 33/310	1942	4	50	128
" 33/372	1940-42 inc.	42	741	67
" 33/409	1939-42 inc.	46	776	49
" 33/485	1940-42 inc.	9	124	88
" 34/1	1940-42 inc.	22	415	103
" 34/21	1939-42 inc.	25	427	76
" 34/53	1940-42 inc.	12	188	84
" 34/54	1940-42 inc.	11	172	46
" 34/75	1940-42 inc.	11	173	80
" 34/77	1940-42 inc.	18	304	72
" 34/79	1940-42 inc.	36	665	55
" 34/80	1941-42	15	244	113
" 34/86	1940-42 inc.	11	170	149
" 34/92	1940-42 inc.	10	159	61
" 34/115	1940-42 inc.	10	154	130
" 34/139	1941-42	12	180	115
" 34/141	1941-42	7	95	88
" 34/143	1941-42	7	95	91
" 35/14	1941-42	4	51	165
" 36/17	1941-42	8	108	73
" 36/19	1941-42	8	112	79
" 36/55	1939-42 inc.	6	70	81
" 36/56	1941	2	29	59
" 36/62	1941-42	5	65	90
" 36/70	1939-41-42	8	102	82
" 36/75	1939-41-42	7	90	92
" 36/85	1939-42 inc.	7	85	61
" 36/94	1939-41-42	5	60	101
" 36/105	1941	2	30	90
" 36/191	1941-42	10	104	130

CORRECTION

In the September 1st, 1943, issue of *The Sugar Bulletin*, page 200, lines 30 and 31, the statement, "American Citizens certified by the Federal Bureau of Investigation" is erroneous. It has been ascertained that native born Japanese American citizens are not certified by the Federal Bureau of Investigation.

(Editor)

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